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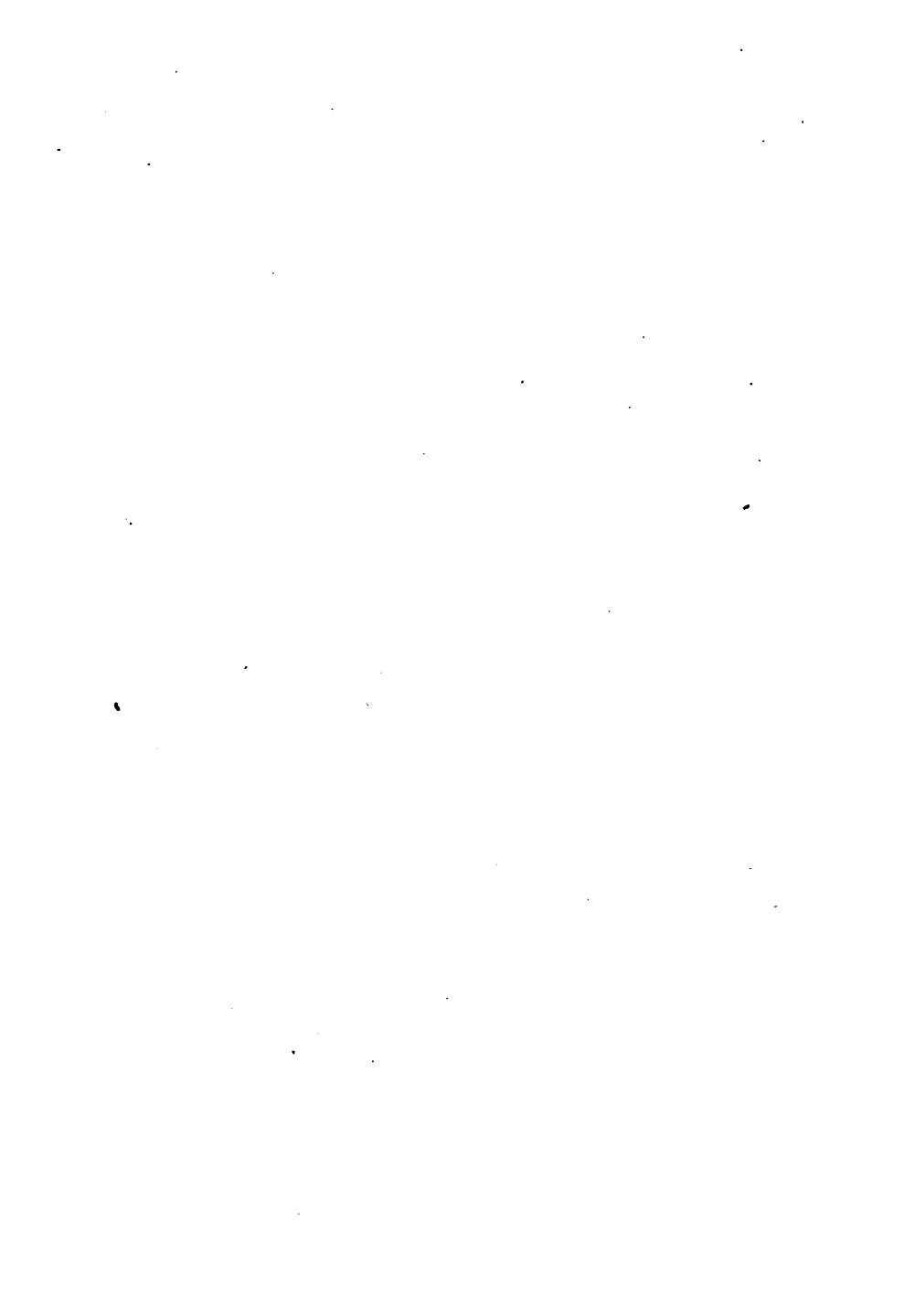
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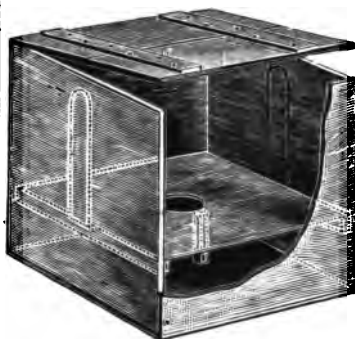
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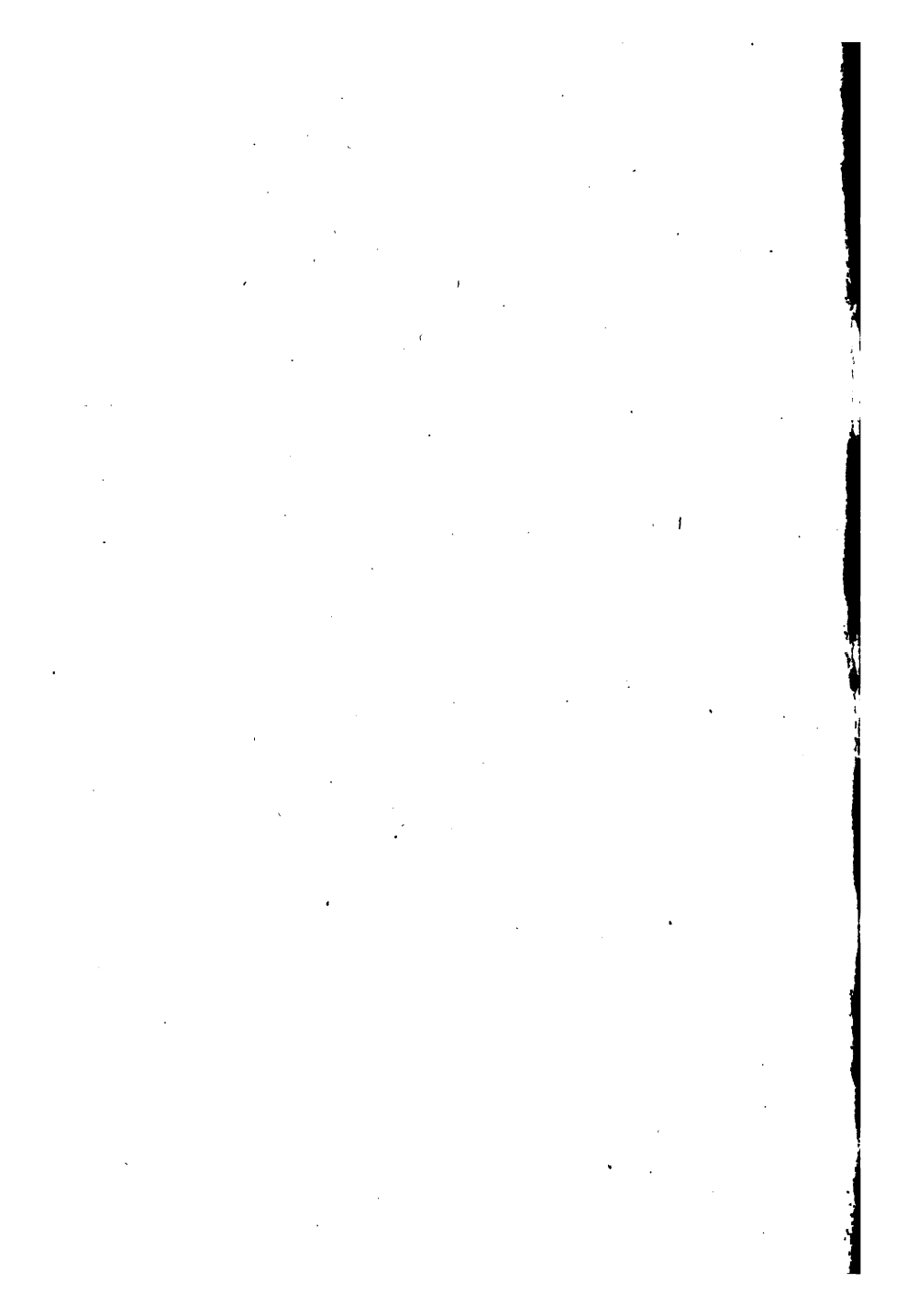


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## PREFACE.

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DESPITE the powerful attractions of the many forms of outdoor amusements, the pursuit of gardening more than holds its own. It is, in fact, steadily increasing, and each year welcomes a number of fresh recruits to its already crowded ranks. This influx has created a demand for everything appertaining to the proper carrying out of the pursuit, and in this the literature of the subject has very naturally participated. Strange to say, however, the absolute novice has not been so well catered for, and it is for him especially that this manual has been written—the man or woman, in fact, whose small garden is a source of unknown possibilities.

In a manual of this kind the chief difficulty which presents itself is how to cover a very wide subject in a restricted space. Perhaps it is this which has deterred more capable exponents from undertaking the task. However, the writer has done his best, and though the particulars furnished are but brief jottings from an amateur's diary, it is hoped that they will be found useful by the class of gardeners for whom they are intended.

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HOME GARDENING.

CHAPTER I.

INTRODUCTORY.

"How shall I stock my garden?" may not present such a difficult problem for solution to the amateur gardener as does the vexed question, "How shall I educate my son?" to the anxious father. That, however, it does present difficulties—and considerable difficulties—must be evident to anyone who has even dabbled in gardening matters.

Gardening is a healthful and invigorating pastime, and once the A B C of the subject has been mastered, it is one of the most fascinating avocations which one can take up. Thousands are each year attracted to its ranks, and it is quite impossible to labour long in such a field without feeling alike better in mind and body. Nature is presented to the student in so many phases, that her all-refining influence is quickly felt, as page after page of what was previously a sealed book is revealed.

In speaking of gardening, too, I refer to its restricted meaning—the meaning rather of the majority, who have, say, a small space at the back of their town or suburban villa which they wish to utilise to the best advantage—and not to the higher forms of the art, such as orchid-growing, the cultivation of choice exotics, or even of flowering plants and vegetables for exhibition. The amateur must walk before he can run, and by the time he is able

to accomplish the latter he will have found far more capable exponents of a Science of which so far all too little is known even by the most practical.

Thanks to County Council lectures and the useful work disseminated by a cheap and popular Press, the amateur of to-day is in a far better position to acquire knowledge than he was even ten years ago. Still, for all that, his bewilderment at the choice of good things in every catalogue reaching him is as great as ever it was. There is the same embarrassment of riches—the same difficulty of selecting from such a host the varieties in each section best adapted to his individual requirements. The glowing descriptions of each vegetable or flower, as he eagerly scans the catalogue's pages, perfectly confuse him; for even in his anxiety to secure the best kinds, his want of confidence in his own judgment not infrequently leads him into error. Moreover, he may be situated in a remote district unreached yet by the educating voice of the County Council lecturer, and where the village library contains nothing so unorthodox as a guide to gardening.

It is with the idea of helping such as these that the present manual has been devised by an amateur for an amateur. Of necessity it is impossible to crowd into a book of a hundred pages or so even the pith of so vast a subject, though it is possible to give much helpful information—in such a way, too, that it will, it is hoped, be readily grasped—and, moreover, to publish the book at a price which is within the reach of all. The author's endeavour will be to give some such information as he himself stood in need of twenty or more years ago, and in doing so, he trusts that in each phase of Home Gardening presented there will be something that will be of service to the novice of to-day.

The ground covered by this little work will be the Flower, Fruit, and Vegetable Gardens, Window Boxes, Window Gardening, Room Decoration, and Shrubs for Small Gardens (with special reference to town subjects), Wall Coverers, Plants for Cool Greenhouses and Frames; and under each principal section, too—Fruit, Vegetables, etc.—some slight allusion will be made to the foes of the gardener.

In dealing with Flowers proper, it will be the author's desire to give a helping hand to that more permanent form of gardening

which he thinks should obtain—namely, the more extensive employment of perennials. In doing so, however, it is not wished to decry the use of the annual—weedy and ephemeral though it oftentimes be—but rather to show how, when the beauty of the one has been passed, there may still be the glories of the other to anticipate. A few words will be devoted to the consideration of the winter and spring garden—now, alas! too frequently a scene of desolation at these seasons. Yet, with so many beautiful and hardy evergreens at disposal, one can only marvel why such things be.

CHAPTER II.

THE FLOWER GARDEN.

Villa Gardens.—By far the greatest number of people to be catered for are the occupants of villas; it is therefore proposed to deal with one or two of the commonest types of gardens. This will perhaps serve as a slight guide, as after all it is most difficult to lay down hard-and-fast rules for the planning out of such gardens. The ordinary villa garden is usually a most difficult one to make really effective, as the surrounding conditions are only too frequently of the most unfavourable description. When the villa is semi-detached, the rule is for a strip of land to run back from the house a certain distance. This strip, termed a garden, is often the same width as the house, and enclosed by a wall on each side, which separates it from gardens of similar size belonging to neighbours.

Fig. 1 illustrates a garden of this description, which must be laid out on somewhat simple lines, as space will not permit of anything elaborate, nor would any elaborate style appear to advantage in such a small area. However, before any planting is done, the drainage ought to be made good if at all defective, and the soil of the beds and borders rendered suitable for the reception of the plants. If the soil be of a heavy character, road sweepings or scrapings, fine ashes, or any good material that will assist in making the soil more porous, will be very beneficial. Again, if the soil be poor and hungry, a liberal application of manure, dug or trenched deeply in, will be necessary: otherwise the plants would languish.

Having prepared the soil, the walks should be made. This consists in excavating the soil from 8in. to 10in. deep, and the

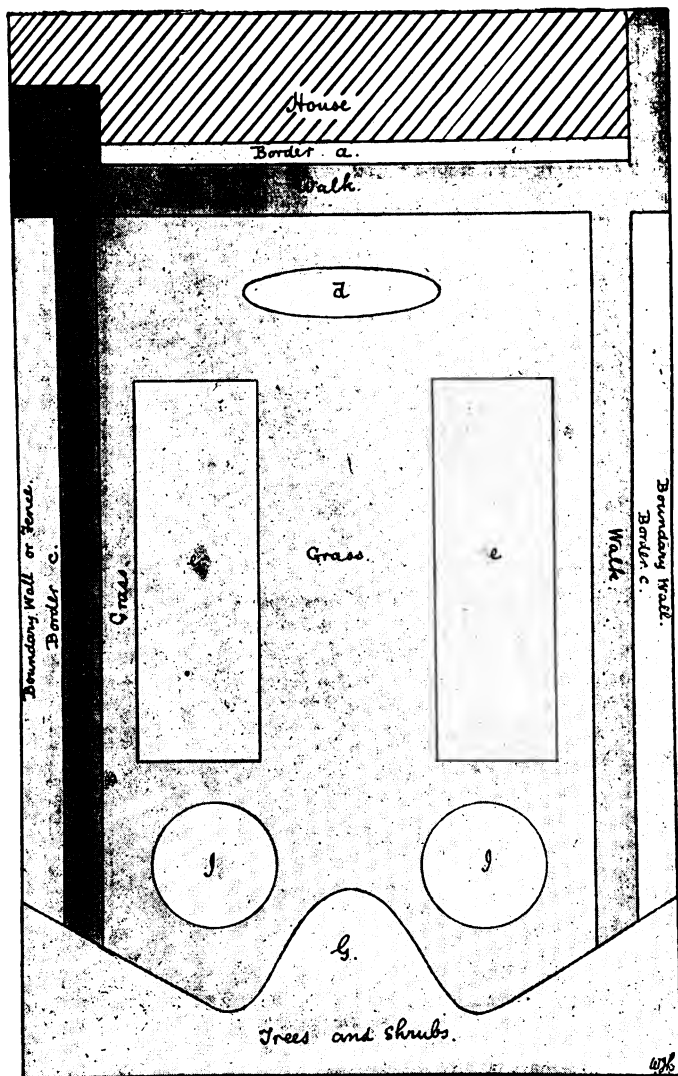


FIG. 1.—COMMON TYPE OF VILLA GARDEN.

requisite width, then filling in to a depth of about 6in. with broken bricks, clinkers, or rough stones. Over this there should be laid 2in. or 3in. of rough gravel, and on that, again, an inch of fine or sifted gravel, making all firm, and placing it so that the walk, when complete, is highest or rounded in the centre, and gently sloping to the sides. Such a walk is dry both summer and winter, and amply repays the extra labour and expense incurred. Occasionally the walks are edged with strips of oak board, firmly secured to oak posts driven behind them. The oak posts and boards are nearly level with the surface of the lawn or grass edging. The advantages of such an edging are that the verges of the grass are always in place, there is no trouble in cutting them, and the sides always look neat and trim.

The next operation is the making of the lawn. This should be levelled and made thoroughly firm in every part. Unless made firm, portions will sink, and the surface become uneven later on. The beds, of course, would be marked out and made before. After having made the surface perfectly level, sow the seed thickly, and cover lightly with finely sifted soil. For the neighbourhoods of towns Lawn Grass seeds, suitable for such localities, are sold by the leading firms. Webb and Sons, Stourbridge, keep an excellent mixture. The seed may be sown at almost any time of the year if protected from birds, but a good sward is most quickly obtained if sown in the spring. As the young sward grows, it should be kept mown and well rolled. All daisies and dandelions should be drawn out immediately they are observed. In fact, any very coarse-growing plant that may appear is best removed at once.

The planting of the garden will depend in a great measure upon the taste of the owner; but not a little also upon the extent of his pocket. Dealing with Fig. 1, Cordon fruit-trees would succeed if planted in the border *a*, and trained up the sides of the house, unless the aspect were due north. If the aspect were south or south-west, Peaches and Nectarines would answer if desired, trained as fan-trees. On the other hand, the following climbers would be very ornamental: *Azara integrifolia variegata* and *A. microphylla*, both with dense and handsome foliage; *Ceanothus Veitchianus*, a charming blue-flowered plant; *Crataegus Pyracantha Lelandii*, in winter covered with orange-red berries; *Garrya*

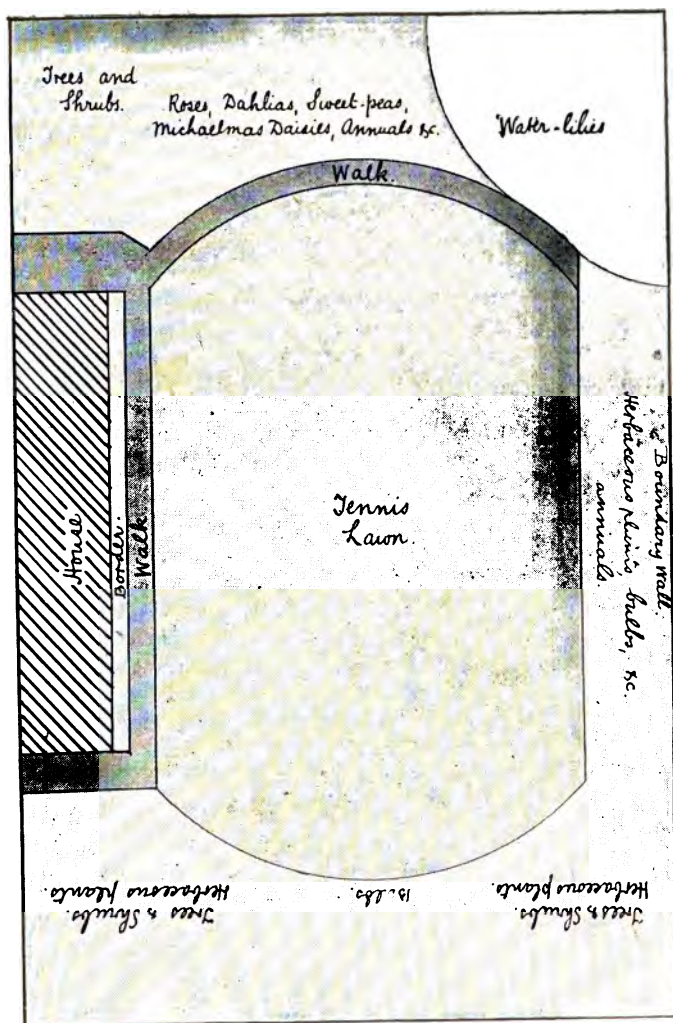


FIG. 2.—COMMON TYPE OF VILLA GARDEN.

elliptica ; *Lonicera sempervirens* (Scarlet Trumpet Honeysuckle) ; *Magnolia grandiflora*, and any of the Ivies, of which there is a great variety. All the above are evergreen. If desired, the following deciduous climbers could be added : Roses in variety, Clematis, Honeysuckle, *Ampelopsis Veitchii*, Jasminums, etc. The boundary wall or fence could be covered with espalier-trained fruit trees, Roses, Ivies, Wistaria, whichever the owner preferred, all or any of which would be effective. The borders *c*, if planted with herbaceous subjects thinly, with bulbs, annuals, etc., dotted in amongst them, would be charming all through the season and supply cut flowers in quantity. The following herbaceous plants are dwarf, and would not interfere with the plants or trees trained against the wall or fence : Anemone, Aquilegia, Campanula, *Coreopsis lanceolata*, Dicentra, Funkia, Gaillardia, Gerbera, Geum, Hemerocallis, Heuchera, Iris in variety, Linum, Montbretia, and Statice. Amongst bulbs there are Gladioli, Daffodils and other Narcissi, Hyacinths, Tulips, and many others. The varieties of annuals are almost endless ; but any of the dwarf-growing sorts, if sown early in April, in fine, friable soil, and not allowed to become crowded as they grow, would produce an enormous quantity of flowers during the summer. The bed *d* might be planted with Carnations, Pompon or Cactus Dahlias, Tea Roses, etc. If planted with the last-named, some of the early-flowering bulbs, like Daffodils or Hyacinths, could be grown amongst them, not disturbing the bulbs after flowering. The two long beds (*e*, *e*) could be planted with Roses, Rhododendrons, early-flowering Chrysanthemums, or anything else preferred. If Rhododendrons were planted, some of the Lilies (*L. auratum*, for instance) could be got in amongst them. As a rule this splendid Lily seems to thoroughly enjoy such a position, and produces magnificent spikes of flower. The two circular beds (*I*, *I*) would be very effective planted with Pentstemons, Antirrhinums, or any similarly beautiful yet inexpensive flowers. In brief, it may be stated that nearly all the hardy or semi-hardy plants, but chiefly the former, will prove far more desirable and pleasing than any of the tender bedding plants so much in favour with villa garden owners.

In most town gardens it is desirable, as far as possible, to have

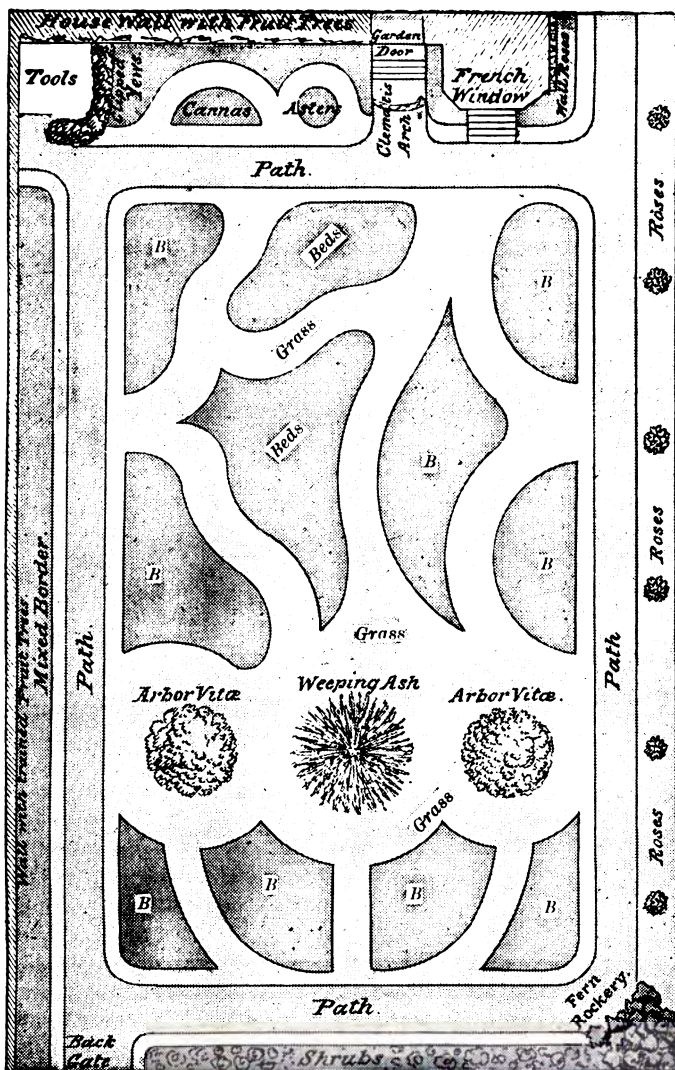


FIG. 3.—PART OF GARDEN AT HOUGHTON.

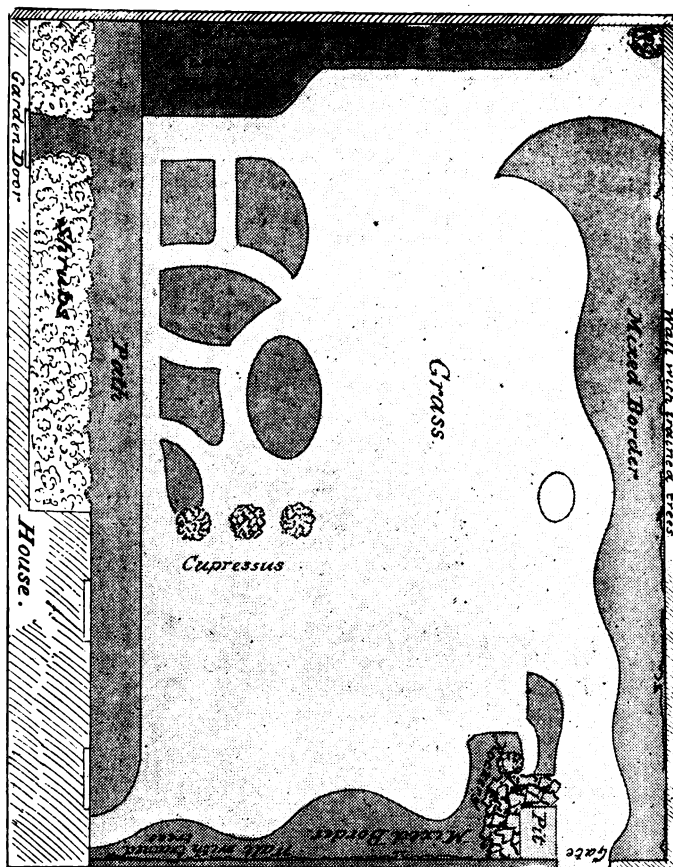
a block at the bottom of the garden, not only to make the place private, but also to shut out the everlasting view of bricks and mortar. For that reason the end (*g*) is marked as planted with trees and shrubs. Amongst those that seem to thrive in towns are *Cupressus Lawsoniana*, a quick-growing, tall, evergreen tree; all the Yews, Hollies, Tree Ivies, and the Hardy Bamboo (*Bambusa Metake*). In deciduous subjects there are the beautiful Golden Privet, *Berberis* in charming variety, Acers in sorts, Prunus, Azalea Mollis, and Thorns. Many others might be included, but those named will produce a fine effect when well established.

Fig. 2 represents another form of garden attached to villas, and, as will be observed, the major portion is devoted to grass for tennis or other games. This kind of garden finds much favour, being both pleasing to the eye and inexpensive to keep in order. The subjects already recommended for planting against the house are also suitable for this one. Facing the trees and shrubs in the borders marked, such tall-growing plants as Sunflowers, Dahlias, Perennial Asters (or Michaelmas Daisies), and Rudbeckias, would have a good appearance. Facing those, again, Phloxes, Early Chrysanthemums, and similar moderate-growing plants would answer, with bulbs of all kinds and annuals filling the space to the margin of the border. If a small pool of water could be made in one corner, the hardy Water Lilies would always prove a source of attraction; and when once established they would require no further care. It is marvellous the immense quantity of flowers these plants will produce, and no flower is more admired than Water Lilies placed in glass bowls in rooms. If the boundary walls are covered with Ivy, a nice finish is given to the whole place, which is thus made to look homelike, and any newness is done away with. Any new house may rapidly be made to appear as if built for many years by a judicious system of outside embellishment with trees, climbers, and other plants. The first cost may seem somewhat heavy, but when once done, the only outlay incurred afterwards is maintenance.

Two other types of villa gardens are shown at Figs. 3 and 4. Fig. 3, in particular, shows a method of laying out which is less formal than that usually employed for villa gardens, the irregular-shaped beds when judiciously filled proving very effective, while

the evergreen *Arbor Vitæ* and the graceful Weeping Ash used as lawn plants go to form a pleasing whole. It would

FIG. 4.—GARDEN DESIGN IN WHICH THE PRINCIPAL FEATURE IS GRASS SPACE FOR TENNIS OR CROQUET.



not serve any good purpose to deal with more pretentious places. What, therefore, is proposed is to describe briefly a few of the more useful subjects in the annual, biennial, and perennial

sections, and at the same time refer to some of the bulbs worthy of a place, giving brief notes where called for as to their requirements.

A difficulty that is constantly presenting itself, more especially in town gardens, is how to effectually shut out from view some structure which is so located that it is offensive to the eye at almost every point. In the case of small properties it is the wash-house which usually gives offence, and which seems to tax all the ingenuity of the amateur gardener to render it sightly. Even in town gardens the wash-house and similar buildings, if they cannot be actually beautified, can at least be rendered comparatively inoffensive to the eye. Fig. 5 will show how such a building as the one illustrated has been simply, but successfully, treated in one of the London suburbs (Enfield). It has been brought about in this wise: an evergreen has been placed near the door; while the rain-water pipe has been practically hidden from view by a climbing Rose and a Clematis. Over an archway leading to another wash-house Honeysuckle and Ivy intermingle. Not only so, but the latter being evergreen, it is fair to look upon even in midwinter. In the foreground are to be found the usual bedding-out plants, these having taken the place of the spring-flowering bulbs. No hard-and-fast line can be laid down for the decoration of such places, and the illustration is only given as showing what is possible. There is any amount of scope for artistic tastes; for the field is practically unlimited in extent.

Before calling attention to desirable subjects for the flower garden, it is proposed to remark generally upon the chief sections of plants with which to embellish the garden, beginning with the

Hardy Annuals, by far the most popular with the average gardener, by reason of their cheapness and the facility with which they may be cultivated. Even hardy annuals, however, require some attention if they are to be grown properly. Before this can be accomplished there are certain conditions to be complied with. First among these is the nature of the soil. This must be fairly rich and friable, otherwise the best results must not be expected. Secondly they must not be crowded, since light and air are as necessary to their well-being as to that of fruit trees, and without such they cannot thrive. There are, of course, in every class of plants, as I shall show in the chapter dealing with plants used

in the decoration of rooms, subjects which are sufficiently accommodating to flourish under conditions somewhat opposed to those under which they are found in a natural state. These are the exceptions. And so it is with annuals.



FIG. 5.—METHOD OF MASKING UNSIGHTLY OUTHOUSES.

Another point that must be observed in the cultivation of annuals is the proper sowing of the seed. Some seeds are so small that they require but the lightest and most finely sifted of covering—say, soil approximating in bulk to their own weight. Then

there are others which require covering with soil twice their diameter, and yet others which are still larger, and which need to be more deeply planted. Even in this the cultivator will have to be largely guided by the nature of the soil; a depth that would suit a heavy soil would be unsuitable in a light soil; and *vice versa*. It would, for instance, be the height of folly to attempt to grow Mignonette planted deeply in a heavy soil, whereas in a light soil it would matter but little. As to the time of sowing, the majority of annuals are best sown in the spring, and afterwards thinned; but there are some kinds—like the beautiful blue-flowered Californian *Phacelia viscida*, to go no further, so indispensable for colour in gardens—which may safely be sown in late summer and autumn, and afterwards transferred to the quarters where they are intended to flower.

The middle of March is quite early enough to sow the seeds, but April is still better, as then the ground is warmer, and germination is thereby facilitated. Whether March or April be selected, or both, the conditions of the soil must be taken into account. A wet, sodden condition is absolutely fatal to success. The ground must be friable. No watering will be necessary. This applies to spring sowing. The conditions, however, may be quite different for late summer or autumn-sown annuals. Then it may be necessary to give the bed or border a good soaking beforehand, allowing the moisture to be thoroughly absorbed before the seed is actually sown. As to how the seeds should be sown, this is largely a matter of individual taste. In a mixed bed, such as I would advocate, of perennials and annuals, neat circular drills, which can be made with a line and stick, are as good as anything, bearing in mind the colours of the more permanent occupants, with which the annuals are being placed in juxtaposition. For some autumn-sown annuals I always employ straight drills upon the border, as they are very easily kept clean, and the seedlings are readily transferred therefrom when the time for their removal arrives.

Thinning is a detail of the greatest importance in the cultivation of all annuals. The first thinning should take place immediately the seedlings begin to touch each other. The next should take place a week or two later, leaving the plants on this occasion 2in. apart; while the final thinning will have to be determined by

the habit of the plant, 9in. not being too much for some kinds if space can be spared. All seedlings suffer more or less from insect and other pests, though more particularly from slugs. These I have found responsible for the greatest amount of mischief amongst annuals, and they must undoubtedly be reckoned with. Soot constantly renewed will act as a deterrent, but it is useless to rely solely upon this. Traps must be resorted to, and there is nothing better than brewers' grains laid in small heaps. These must be examined each evening by the light of a lantern, and the molluscs thrown into a good pickle of lime and allowed to remain there until morning.

The after-management of annuals consists chiefly in not allowing the seed-pods to form, and in keeping them free from weeds. Sweet Peas, for instance, if allowed to seed, have but a very short life, whereas if the flowers are kept well picked, and the plants not allowed to suffer from lack of water, they can be had in beauty for months.

There should always be kept a reserve spot in the border for growing annuals and biennials that are, say, to furnish the next season's display. This should be made up of rich, friable soil, in which the roots will ramify, and from which the plants can be readily separated when the time for transplanting them is at hand.

Something may here be said about the sowing of annuals to stand the winter. They should be sown in August and treated exactly as spring-sown annuals in the matter of thinning, reserving the transplanting to their permanent quarters until the first fine weather of spring. The thinning is very important, for unless a free circulation of air is afforded the plants, they are certain to collapse in the winter, the growth being sappy, and therefore very susceptible to frosts.

As to the manner in which the annuals shall be used in beds or borders, this is a matter for individual taste. Many cultivators, for instance, enjoy a massed bed; while others abhor such a system. Personally I am averse to massing, as, however well attended to, the beauty of such a bed is naturally somewhat ephemeral. Far more pleasure I think is to be derived from a judicious admixture of annuals and biennials with perennials, taking into consideration the times at which the flowers are produced, so that the bed at no

time is dull. It is astonishing what may be done by the exercise of a little ingenuity to render some most informal effects by the aid of annuals. Take, for instance, Common Tropæolums like *T. canariense*, *T. fulgens*, and others of like habit. As is fairly well known, these are excellent for covering tree stumps, or hiding the straight stems of standard Roses; but they can also be used with capital effect in beds and borders by simply twisting pieces of ordinary wire, as used for fowl-runs, etc., round stakes. Many amateurs are very fond of arranging their borders and beds according to the height of the plants, but better effects are to be obtained by a less formal system of planting.

Half-Hardy Annuals.—In these are included some of the gems of the section under notice—the China Asters, Zinnias, *Phlox Drummondii*, certain Gaillardias, those old favourites, Chinese Pinks, French and African Marigolds (*Tagetes*), the curious *Salpiglossis* (not half as widely known as they should be), *Martynia fragrans*, Stocks, etc. These plants are raised in gentle heat. Asters, for instance, are sown towards the end of April on a gentle hot-bed, and the seedlings afterwards kept near the glass to prevent them from becoming “drawn.”

Where but a few plants are required, the seed may be sown in boxes filled with a fine light soil. Previous to sowing the soil should be made level and watered, and allowed to drain. It is a good plan to lightly cover the seed with fine sand and then to place a pane of glass over the top, with a view to preventing evaporation, and also of preserving a uniform temperature. The glass should be removed as soon as the plants are large enough, and they should be pricked off into a light, rich soil in a garden frame, taking the greatest care to keep them shaded: otherwise, if attacked by green-fly, as they frequently are, they are very liable to succumb. Asters like a good rich soil when planted out. Zinnias may be similarly treated. Being strong growers, however, they must be allowed plenty of room to develop. They are sun-lovers, and provided they are kept moist at the roots, they cannot well have too much. As a matter of fact, what has been said in respect of the raising of Asters and Zinnias will hold good for most other half-hardy annuals.

Biennials, of which the Wallflower is one of the best known, usually require two seasons to mature their growth, although it is possible, by resorting to artificial heat, to raise and flower them the same year. They require the same general treatment as annuals. Taking the Wallflower as an example, the process of cultivation is briefly this: The seed is sown on a specially prepared spot in the border in April or May, the idea being to get sturdy plants before the winter sets in. When the seedlings are 2in. high, they are transplanted in rows 1ft. apart, leaving 3in. or so between the individual plants. If the weather is dry, the young plants are watered occasionally, and by the end of a month they should be ready for their permanent quarters. With certain varieties flowers may be picked at Christmas, but of course the proper display will be in the April following. After the plants have finished flowering they may be thrown away.

Perennials.—For those of small means the plants belonging to this section are by far the most useful, as they are permanent. Once a collection of suitable subjects has been obtained, a stock is readily kept up. Moreover, take them altogether, they are very easily grown, while they may be utilised in such a variety of ways that their claims cannot well be overlooked. In many places perennials have, to a great extent, superseded the ordinary tender bedding-out subjects, which, though gorgeous enough while they last, are very short-lived: added to which, they require any amount of care and attention for more than half the year to bring them to the requisite condition for bedding out, and when this is taken into consideration, the advantages perennials possess over them will be sufficiently obvious to any practical gardener.

From what has been said, it must not, however, be thought that perennials require no very great care, or that all that is necessary is to put them in fairly good soil and leave them to their own devices. Nothing of the kind. If perennials are to yield their greatest beauty, they must first be carefully selected, and secondly they must be afforded the necessary nourishment by topdressings each year and renovations of the border say every three years. Take them as a class, they soon extract the nutriment from the soil, and if a fresh supply is not forthcoming, the plants

deteriorate and receive bad names, when, as a matter of fact, these are undeserved and belong rather to the cultivator.

Perennials may be planted in suitable weather from October to spring, but in the majority of cases the former is the more suitable time. With regard to the renovation of the borders, November is as good a time as any, especially if mild, dry weather prevails. The borders, having been cleared of their occupants, are well dug, the necessary manure is incorporated, those plants are divided which it is desired to increase by such a method, and the replanting is done as quickly as possible. Fresh roots soon commence to be thrown out, and before the weather is very bad the plants are re-established. I make it a rule never to "fork up" the borders in late autumn, as is frequently done, such a method invariably ending in the destruction of the roots.

Perennials may be increased by seeds, but this method is too slow for the majority of amateurs, divisions or cuttings being far preferable. However, when it is necessary to increase by seed, this should be sown as soon as it is ripe in a friable soil in the borders as for annuals, or in certain cases under a cold frame.

In arranging perennials in the border, though the tallest should be arranged at the back, yet I do not believe in the old-fashioned plan of ranging all according to height. A moderately tall plant arranged in the front row of the border gives splendid effect. Care must, however, be taken in selecting varieties to have such as will afford a succession of blossom from spring to autumn.

Selection of Annuals and Biennials.—There is such a formidable array of these that any list given in a small work must necessarily be restricted. All that is possible is to call attention to some of the best.

For furnishing light and graceful flowers for bouquets, vases, and general indoor decoration, Poppies are extremely useful, so varied and beautiful are their colours. There is none, however, more in request than the Shirley Poppies, to which of late years such prominence has been given. Nearly every colour and shade is to be found among these annuals, which, if sown for the purpose and not allowed to seed, will afford a display from late spring until autumn. Where there are shrubby borders that require a touch of bright colour to enliven them, this can be

readily afforded by the Double Pæony-flowered Poppies, or the equally effective Mikado Poppies, with their exquisitely fringed petals. These are very valuable to gardeners, as they will blossom on the poorest of soils. Another pretty annual Poppy is the Danebrog (Fig. 6).

At the head of hardy annuals stand the Sweet Peas—their lovely colour variations, easy culture, and delicious fragrance entitling them to the greatest consideration at the hands of amateurs. They may be planted in clumps of half-a-dozen, and when staked



FIG. 6.—DANEBROG POPPY

the sticks brought to a point at the top; or they may be sown in drills, some 6in. wide and 3in. deep, and covered with 2in. of soil. The latter gives the better result, especially if the earthing-up process be adopted as soon as the seedlings appear and the whole be made firm, and repeated at intervals. Mulching with manure is very beneficial, as it prevents the evaporation of moisture and also acts as a stimulant. Plenty of water is a necessity in dry weather: mere dribblings are only harmful. The flowers must be kept well picked. Some good varieties are: BLANCHE BURPEE, MADAME CARNOT, DUKE OF YORK, BOREATTON,

LADY PENZANCE, KING OF THE BLUES, COUNTESS OF RADNOR, QUEEN OF THE ISLES, PRINCESS BEATRICE, and COUNTESS OF POWIS.

Despite the fact that it is only half-hardy, *Nemesia strumosa Suttoni* is one of the most effective annuals yet introduced. For it we are indebted to Messrs. Sutton and Sons, of Reading. It is one of the most effective of bedding subjects, and may be grown quite easily. A good range of colours are obtainable, but the showiest are the orange and the crimson. Small beds of the former are exceedingly bright; while patches of either the red or yellow are most desirable amongst any summer bedders. The seed should be sown in heat in late January or early February, and the seedlings potted, as they become large enough, into "sixties" and gradually hardened off, planting them out in the open towards the end of May.

Where a quick grower is required to cover the bare stems of standard Roses, the varieties of *Convolvulus major* will admirably serve, their foliage and flowers being alike striking. Godetias are useful border plants—DUCHESS OF ALBANY, LADY ALBEMARLE, THE BRIDE, and GLORIOSA giving variety. These require plenty of room to develop. They are quite hardy. Salpiglossises are half-hardy annuals with uncommon lily-like flowers. They like plenty of light and air and a fairly rich soil, and need staking. It is rather surprising that these remarkably handsome flowers do not oftener find a place in gardens. *Phlox Drummondsi* is an old half-hardy favourite, now surpassed by the form *grandiflora* and some of the other kinds. They have a long period of beauty and may be raised similarly to Asters and Ten Week Stocks. The latter should be grown for their fragrance alone.

Though more correctly classed as perennials, Snapdragons (*Antirrhinum*) can nevertheless be most successfully grown as annuals by sowing the seed in slight heat early in February and transferring the seedlings when large enough to other boxes, allowing plenty of room—say, 5in. between each plant. These will soon develop into sturdy, bushy plants, and after being gradually hardened can be put out in May, when they will flower abundantly. Where no convenience exists for growing the seed in heat, then it may be sown in summer in drills in the open, whence the young

plants may be transferred. The dwarf varieties are most useful; SUTTON'S IMPROVED TOM THUMB can be recommended, as can also the variety QUEEN OF THE NORTH.

Nowadays such marvellous varieties of Asters are available, that one can hardly connect them with the China Asters of old. Amongst the most beautiful is the COMET (which approaches somewhat a Japanese Chrysanthemum), the VICTORIA, TRUFFAUT'S PEONY-FLOWERED, the CHRYSANTHEMUM-FLOWERED, and the GIANT FRENCH. For borders, *Centaurea Cyanus* is a useful plant and looks well when grown in fair-sized clumps. Other effective plants belonging to the hardy section are *Schizanthus papilionaceus* and *S. retusus*, whose butterfly-like blossoms are always appreciated.

Dwarf Nasturtiums should be grown where there is a poor soil—EMPRESS OF INDIA and GOLDEN KING being two showy kinds. Other showy subjects for similar quarters are the double varieties of *Calendula officinalis*. These improved forms of the Common Marigold are most desirable, especially the pale yellow LEMON QUEEN; the richer ORANGE KING; and METEOR, a good yellow striped with pale lemon. These are perfectly hardy and very free flowering, and their season of beauty a long one. They may be, of course, sown outside, but the best results are obtained by sowing the seed in slight heat, transferring the seedlings when large enough to boxes of rich soil, hardening them off, and finally transplanting to borders or beds in May. Neither of these exceeds 1ft. in height. In blue-flowered annuals there is nothing to compare for intensity of colour with *Phacelia campanularia*, a dwarf plant with large, tubular, satiny flowers. Such old favourites as *Nemophila insignis* and *N. maculata* ought to be included, as hardy blue flowers are by no means common. These are both suitable for sowing the first week in September, and remaining in the soil all winter. They are then in flower in late spring.

Annual Chrysanthemums are so popular that they must not be left out of any list, however restricted. There are quite a large number of kinds available, but the varieties of *C. carinatum* are amongst the best. These grow about 2ft. in height and are very showy. ECLIPSE, for instance, is a good yellow with a scarlet ring and rich brown disk—a combination that must be seen to be appreciated.

Even the type itself must not be despised, surpassed though it has been by the variety already named and the dwarfed PURPLE CROWN. These annual Chrysanthemums will grow almost anywhere, and it is their very accommodating nature coupled with their beautiful colour combinations which has made them popular. There is another kind which has of late years found considerable favour—*C. segetum grandiflorum*, a variety of the common yellow weed of our cornfields.

Where lightness and grace are required amongst cut flowers the annual Gypsophilas should be represented. And the same may be said of the feathery annual grasses, which do well in a small border if the seed is sown thinly in April. These grasses are also suitable for drying after the manner of the "Everlastings."

Other annuals deserving of a place and not requiring any special culture are the bright yellow *Limnanthes Douglasi*; the yellow *Bartonia aurea* (Fig. 7); the blue and white Collinsias, of which *C. bicolor* is very familiar; the pretty Candytufts (*Iberis*); the quaint Devil-in-the-Bush (*Nigella damascena*); Lupins; Mignonette; *Leptosiphon aurea* and *L. roseus*; *Eschscholtzia rosea* and *E. coccinea*; and the double and single varieties of the Indian Pinks (*Dianthus*) (these last are usually classed as biennials, but they succeed equally well when grown as annuals, sowing the seed in slight heat); Portulaccas (half hardy); Rhodanthes (half hardy); Sweet Sultan (GIANT WHITE); and Virginian Stock.

Canterbury Bells are amongst the most popular of biennials: they give a good range of colours, and their flowering season lasts a long time if only the blossoms are removed as soon as they are past their best. For the mixed border or for the shrubby border the varieties of *Campanula Medium* are extremely effective. Uncommonly distinct, but decidedly ornamental, is the plant known as *Chamaepeuce diacantha*, with its spiny, silvery-white variegated foliage and purplish flower-heads. This should be raised in heat in February. *Coreopsis grandiflora*, whose large golden-yellow flower-heads are in such great request in summer, is really a biennial, though frequently grown as an annual by sowing the seed in heat. At any rate, it is one of the best of summer-flowering subjects and will grow in either town or country. Foxgloves (*Digitalis*) are, again, among the easiest of plants to grow, and useful for filling

- odd corners in the garden or for the shrubby border. The white-flowered kinds are chaste to a degree. Closely allied to the Campanulas is a little known but very decorative border plant, *Michauxia campanuloides*. It grows about 3ft. high and has white flowers tinged with purple.

Of the commoner biennials, mention may be made of Sweet



FIG. 7.—*BARTONIA AUREA*.

Williams, Wallflowers, *Lunaria biennis* (Honesty), *Scabiosa atropurpurea*, the Evening Primroses (*Enothera biennis* and *Æ. Lamarckiana*), *Matthiola incana* (Brompton Stock), and *Hedysarum coronarium* (French Honeysuckle).

A biennial that deserves to be better known and more widely recognised is *Meconopsis nepalensis*, a near relative of the Poppy. It has large, rich yellow, drooping flowers, and is quite one of the

handsomest subjects in the class that can be given a place in any garden.

Selection of Perennials.—Here, again, the amateur is confronted by such a very formidable list of good things that it is only with the greatest difficulty he can make a selection. As in the case of the annuals, but a very brief reference can be made to suitable kinds. Those who are desirous of going fully into the subject had better obtain “Hardy Perennials,”* in which all the best species and varieties are fully described.

For beds or borders the early-flowering Heaths are deserving of special mention. They are amongst the first flowers to put forth their beauty, and in mild seasons it is not at all uncommon to find them flowering in January. *Erica carnea* and its many varieties are all good. There is a very general impression abroad that these Heaths cannot be grown except in peaty soil. This, however, is erroneous. I have had them for years in fine flower in a light loam in a Surrey garden. Some may question the advisability of mentioning these here rather than under “Shrubs.” I have preferred to take the wider application of the words “Hardy Perennials,” and refer to a few of the smaller shrubby subjects here.

As edgings Candytufts (*Iberis correæfolia*, *I. gibraltarica*, and others) are very suitable. Moreover, they are easily increased by cuttings taken in September and inserted in a cold frame. Old plants become leggy. *Armeria maritima* (Common Thrift), and one or two of its tufted forms, are often useful edging plants, increasing rapidly. They will stand drought really well, and while some of the border subjects are flagging, despite the utmost care on the part of the gardener, these pretty little plants remain unscathed. Besides yielding an abundance of delicate pink flowers over a long period, they are always fresh and green-looking, being evergreen. Some gardeners object to Thrift on the ground of its harbouring slugs and other pests; but if properly looked after there is no need for the amateur to be disconcerted. These Armerias can be divided in either autumn or spring, and practically every portion with a root will yield a plant. The

* “Hardy Perennials and Old-fashioned Garden Plants,” by J. Wood. London: L. Upcott Gill, 170, Strand, W.C.

Thriffs soon cover a lot of ground ; so that this characteristic must be taken into account when planting.

Of quite a different character are the Aubrietias, which are now so largely used for spring beds and borders. Two old favourites are *A. græca* and *A. purpurea*. They are easily propagated. My own plan is to cut off the growth to within a couple of inches when the flowering season is past, divide the roots, and insert them thinly in rows in a light, fairly rich soil. Other most desirable species are *A. Leichtlinii* and *A. Hendersoni*. There is hardly any need to refer to the utility of the Double Daisies for spring borders ; but the claims of *Alyssum saxatile compactum*, with its showy orange flowers, are liable to be overlooked with the wealth of material at hand and the many novelties which are constantly being paraded before the eyes of the cultivator. The old plants give a better floral display than do the young ones ; but the latter are not infrequently used as edgings to the former. This pretty *Alyssum* likes a deep soil. It can be increased either by cuttings in September or by seeds sown in the open border in the early summer.

Double and Single Primroses are always welcome in the borders. Of these, again, a stock is quickly worked up by dividing the plants into as many pieces as have roots, and inserting them in a cool border. In summer they like plenty of water, and if liberally treated in that respect, good plants are formed by the time they are required for their permanent positions.

Although many cultivators prefer to grow the Alpine Auriculas under frames, yet there is no reason why those who are unable to afford such aids should be denied the pleasure Auricula culture undoubtedly gives. They like a rich soil and a position in which they are sheltered from the rays of the mid-day sun. They are propagated by offsets in autumn or by seed sown in boxes, etc., in spring or autumn. There is scarcely any plant which offers a wider choice than the Alpine Auricula, and the gardener of means can indulge his tastes to almost any extent. In the North Messrs. Dobbie and Sons, of Rothesay, have a splendid reputation for these plants ; while a similar one in the South has been attained by Mr. Douglas, of Great Bookham, Surrey. Amateurs who are going in for these plants for the first time would do well to secure

the list of one or other of these growers in the case of named varieties.

Violas, where a suitable position can be afforded, always repay the amateur. They are subjects delighting in a cool, moist, well-enriched border. They may be propagated by cuttings in either autumn or late spring (May) dibbled in sandy soil in a cold frame, whence they can be taken and planted out where required to flower. The stock should be raised annually. Here, as in the case of the Auriculas before dealt with, there is a splendid choice. For general purposes, ARCHIBALD GRANT, deep blue; COUNTESS OF HOPETOUN, white; WILLIAM NEIL, pale pink; TRUE BLUE; BULLION, golden yellow, can all be recommended as having stood the test of time. Messrs. Dobbie also make a speciality of these flowers. The points to be remembered in the culture of Violas are to allocate them the position already noted and to prevent the seed-pods from forming.

Violets are best cultivated under frames, though they will thrive under practically similar conditions to their relatives the Violas. These also should be raised each year, and especial attention should be given to affording them water in summer. The roots should be divided in spring, and the stock for filling the bed should be selected from those which afterwards emit plenty of "runners." Where frames can be afforded, these should cover the plants in autumn, taking care to allow air on every suitable occasion. For the best results with frames, a warm border should be selected. MARIE LOUISE, PRINCESS OF WALES, WHITE CZAR, ODORATISSIMA, and CALIFORNIA can hardly be surpassed in the way of varieties.

Border Carnations have increased enormously in favour of late years, owing to the fact that quite a new race of plants has been evolved. These subjects ought not to stand in need of recommendation, seeing how very accommodating they are, even flourishing in the gardens of congested towns. The best time to commence their culture is in September, for although it is possible to start in spring, that period is nothing like so favourable as the autumn. There are numbers of growers who make a speciality of Border and other Carnations, and to these the amateur would do well to apply. Firm planting is the keystone to success, and this cannot be too clearly impressed upon the amateur venturing upon the culture of

these flowers for the first time. A sweet, rich soil is also very desirable. When once a stock has been procured, it can be increased without much trouble by layers (*see* Fig. 8) taken in July. These layers will in the ordinary way be fit for severance from the parent plant in September or early October. The great enemies to the Carnation grower are the wireworms, and where these pests exist in any numbers, the culture of the plants is out of the question. Trapping will get rid of some if resorted to in the method advocated in "The Kitchen Garden." Other diseases are Gout, Rust, Spot, and the Carnation Maggot. The first is characterised by a swelling of the stems; the second by blisters on the



FIG. 8.—SHOOT OF CARNATION LAYERED.

foliage; the third by discoloured spots, indicating decay; and the fourth by the very heart of the shoots being eaten. The only remedy lies in removing the infested plants, or portions of plants, and burning them as soon as the diseases are recognised. In a selection of Border kinds the grower is referred to Mr. H. W. Weguelin, St. Mary Church, Torquay, Devon; or to Mr. A. W. Pike, Windsor Place, Cardiff.

Poppies must not be forgotten, for they furnish our gardens with some of the brightest and lightest of early summer flowers. It is not possible in a small garden to have a large selection of Perennial Poppies, and the amateur would do well to restrict his

choice to the variety known as the ICELAND, whose showy flowers, produced on slender stalks, are the embodiment of beauty and grace. There is scarcely a flower I can call to mind which is more effective for vase and table decoration than these Poppies, and on that account they should be always accorded a place. Seed may be sown in either spring or autumn. As in the case of certain Anemones and other plants, it is so exceedingly minute that it is only with the greatest difficulty sown alone. It is, therefore, an excellent plan to use sand for the purpose. A nice friable soil in the open border should be selected. The seed must not be covered, and as a rule no watering will be required at the seasons named. These Poppies are very hardy, and no fear need be entertained of their not wintering safely.

Bold of habit, strikingly showy as to flowers, and as hardy as plants well can be are some of the Coneflowers (Rudbeckias), which are grown in such quantities for market purposes. They may be grown in the borders or in the shrubbery, and are valuable on account of the season (late autumn) at which they blossom. They delight in a rich, well-drained soil, and may be divided in late autumn or early spring. *R. Neumanni* is one of the best. It grows from 2ft. to 3ft. high. It has large yellow heads with blackish raised disk. Another good kind is MORNING GLORY. Closely allied to the Rudbeckias are the Echinaceas; indeed, by many nurserymen they are catalogued under the former name. *E. purpurea* and a variety with rather larger flowers may be included in any choice list of perennials. They require to be treated like the Coneflowers.

Blanket Flowers, or Gaillardias, are well accommodated in a rich soil and warm border, and no perennial gives better results. The brilliant flowers are produced right through summer, and until the frosts of autumn are with us. Mr. James Kelway, Langport, Somerset, has a specially good strain of these Blanket Flowers, which he has done so much to improve of late years.

Starworts, or Perennial Asters, are now ranked amongst the best of border subjects, thanks to the exertions of the florist. The weedy-looking, washed-out Michaelmas Daisy of our grandfathers' time is a thing of the past, and in its place we have things of beauty. They are excellent for beds and for fairly wide borders

with a light but rich soil, and if given plenty of space to develop they are sure to prove satisfactory. When once established, the old roots should be cut up each year, and the outside portions only planted. Some really good kinds—and they will



FIG. 2.—*ASTER CORDIFOLIUS ELEGANS*.

be found excellent for associating with either White Anemones, Double Sunflowers, Marsh Ox-Eyes, or the like—are : *DIFFUSUS HORIZONTALIS* (4ft. to 5ft.) in graceful racemes ; *NOVÆ ANGLIÆ PULCHELLUS* (4ft.), violet to purple ; *ROBERT PARKER* (5ft.), lavender-blue, with yellow disks ; *VIMINEUS* (2ft.), flowers white,

in graceful pendent sprays; *AMELLUS BESSARABICUS* (2ft.), rich purple; *CORDIFOLIUS ELEGANS* (4ft. to 5ft.), Fig. 9, pale lilac, in graceful racemes; and *GRANDIFLORUS* (2ft.), deep purple, very late.

For the remainder of the perennials a very brief summary must suffice, otherwise the list will assume too large proportions. Of those which ought not to be forgotten, mention must be made of the following:—*Delphiniums*, both double and single, with their stately spikes of blue flowers of almost every shade, and requiring a rich soil, as they are strong growers; they should be divided in spring. *Leopard's Banes* (*Doronicum caucasicum* and *D. plantagineum*), useful for spring decoration; the charming *Christmas Roses* which flower so profusely, and whose blossoms, if but given the shelter of a hand-glass, will vie with the snow for purity; *Dog's-Tooth Violets* (*Erythronium*), one of the most notable kinds being *E. revolutum*; and *Globe Flowers* (*Trollius asiaticus*) which are not fastidious as to either soil or site, are very easily grown perennials.

The *Yellow Columbine* (*Aquilegia chrysantha*) is not often seen in collections made by amateurs, though it is very distinct as to colour. *A. cœrulea*, on the other hand, is seldom omitted. *Snappedragons*, especially the dwarf compact-growing kinds, are now very much favoured. A stock should be raised every year. Some choice colours are now obtainable, and if a light, rich soil can be assigned them they will flower right into late autumn, provided the flowers are kept well picked.

Double and single *Pyrethrums*, with their large Aster-like flowers in almost every conceivable colour, are amongst the choicest and simplest of perennials to cultivate. Messrs. Kelway make a speciality of these plants, which florists have of late years so much improved. *Polemonium Richardsonii*, with bright green foliage and blue flowers; 2ft. *Cheiranthus alpinus*, *Alpine Wallflower*, producing an abundance of bright yellow flowers from spring to late summer; 6in. to 9in. *Campanula pyramidalis*, charming *Bellflower*, blue; 4ft. to 5ft. *Campanula glomerata*, purple, white, or violet; 2ft. *Campanula persicifolia* and its double varieties; white and blue; 2ft. to 3ft. *Campanula pumila*, white on long and slender stems, with pretty bright green foliage; a most accommodating subject; 6in. *Campanula carpatica*, compact plant with bright blue flowers, though there are several forms differing

principally as to colour; very strong and accommodating; 6in. to 9in. *Erigeron speciosus superbus*, lilac-purple Daisy-like flowers, with orange centres; very showy; 3ft. *E. aurantiacus*, large rich orange flowers; 6in. *Dodecatheon Jeffreyanum*, rose-pink, drooping, Cyclamen-like flowers; shade-loving; 18in. *Tradescantia virginica*, purple-lilac; very accommodating; 18in. *Oenothera speciosa*, pure white, fragrant, flowers over a long period; 2ft. *Oenothera eximia* (syn. *marginata*, Fig. 10), white fragrant flowers. Both the latter will withstand drought well; 6in. Chinese Pæonies, both double and single, in a great variety of colours, will thrive well



FIG. 10.—*OENOTHERA MARGINATA*.

in any rich soil, and are especially valuable for planting in the shrubbery border. Other species and varieties which may be recommended are: Pentstemons, in a great variety of colours and with flowers reminding one forcibly of Gloxinias as to shape; sun lovers, but requiring plenty of water in summer. *Verbascum phæniceum*, pink, purple, red, or white flowers; 2ft. *Centaurea montana*, flowers varying considerably and produced from late spring to autumn; 1ft. to 2ft. *Galega officinalis* and its varieties, with pea-shaped blossoms of varying colour, the white being as much admired as any. *Eryngium Oliverianum*, a noble plant with thistle-like heads of blue flowers and elegantly cut foliage; 2½ft.

Polygonatum multiflorum. Double Cinquefoils (Potentillas). *Spiræa Aruncus*, feathery panicles of white flowers ; 3ft. to 5ft. *Spiræa palmata*, crimson flowers ; capital subject for a moist, shady situation ; 2½ft. *Helianthus* (Sunflowers), MISS MELLISH and SOLKIL D'OR ; 4ft. *Mina grandiflora*, rich orange, 2ft. *Helenium pumilum*, golden yellow flowers ; 18in. *Hesperis matronalis alba plena*, Double Rocket, pure white ; 18in. *Coreopsis grandiflora*, golden yellow flowers ; 3ft. *Dictamnus Frazinella*, purple, and its white variety ; 3ft. Delphiniums (Single and Double, 3ft. to 5ft.), and especially *D. Belladonna*.

The above list has no pretensions to being anything like exhaustive, and only aims at furnishing a number of plants which have proved their worth. Those who would wish for a more extended enumeration must consult the book named on p. 24 ; or the trade lists issued by such firms as Messrs. Barr, Long Ditton Nurseries ; Messrs. Ware, Hale Farm Nurseries, Tottenham ; Messrs. J. Laing and Sons, Forest Hill, S.E. ; Perry's Hardy Plant Farm, Winchmore Hill ; the Guildford Hardy Plant Company ; or Messrs. J. Veitch and Co., Chelsea.

Roses.—Under this heading it is proposed to deal lightly with these lovely flowers. First as to soil. This must be rich if the best results are aimed at, though on no account must the newly-planted trees be inserted, as is frequently done, so that the roots are in immediate contact with the manure. The ground should be well dug, as the Rose enjoys a good root-run, and where it is proposed to devote beds to the culture of the Queen of Flowers, the soil should be trenched some 2ft. deep and well rotted manure worked in with the staple. For the small garden, Dwarf Roses are more suitable than Standards, as well as being less liable to be cut by frosts. It is almost useless attempting to cultivate Roses in the vicinity of large towns, though if the position is fairly open and the soil suitable there are certain varieties which will succeed fairly well. Crowding is always to be avoided, and this must be taken into consideration when planting. The latter operation is best performed early in the autumn ; the earlier the better. Hybrid Perpetuals as a class are best for the amateur to take in hand ; though if Roses are wished late in the year the Teas must necessarily be employed. Greenfly are

amongst the greatest enemies the Rose-grower in either town or country has to encounter, and they must be attacked directly the shoots and other parts are noticed to be infested. Killm-wright, or a weak solution of Calvert's Carbolic Soft Soap, will prove effectual and will not injure the foliage. There is another pest, however, which is more difficult to eradicate, for the simple reason that, being rolled up in the leaves, it cannot be touched by insecticides. This is the "Maggot"—really the larvæ—of certain species of Leaf-rolling Moths (*Tortrices*). Squeezing the rolled-up leaves between the finger and thumb is the only way of dealing with the pest. Rose-trees must be examined carefully and often, particularly in the beginning of the season, and all insecticides should be syringed on lukewarm. Mildew must also be reckoned with, and this must be kept in check by means of a sulphur preparation, of which there are many on the market.

For full details as to culture for exhibition, planting, pruning, and the like, I must refer my readers to one of the numerous manuals on the subject, that by the Rev. Honynood D'Ombrain, the Secretary of the National Rose Society, being as good as any. I would, however, urge upon the amateur the advisability of not pruning before March is well advanced; otherwise the buds will push correspondingly early, and then, with the severe spring frosts which sometimes occur, good-bye to fond hopes of a first crop.

In the matter of varieties the following can be recommended for small growers: MRS. JOHN LAING, soft pink; GENERAL JACQUEMINOT, brilliant crimson; DR. ANDRÉ, rich red; MERVEILLE DE LYON, white, delicately tinted with pink; JOHN HOPPER, rose; MADAME VICTOR VERDIER, crimson-scarlet; MAGNA CHARTA, bright pink, suffused with carmine; PRINCE CAMILLE DE ROHAN, velvety crimson maroon. The above are Hybrid Perpetuals. In Teas and Noisettes there are none better for all-round purposes than GLOIRE DE DIJON, buff; NIPHETOS, white; MADAME LAMBARDE, bright pink, lovely for buttonholes; ANNA OLIVIER, pale rose, shaded with deeper rose; MADAME BÉBARD, salmon-rose; MADAME FALCOT, rich yellow; HON. EDITH GIFFORD, white, rose tinted. Space should also be found for the lovely Bourbon Roses SOUVENIR DE LA MALMAISON, pale blush—this is especially valuable in autumn—and ACIDALIE, white, tinted with rose.

Lovers of the fragrant Sweetbriar should also include in their gardens a bush or two of the Hybrid Sweetbriars, which Lord Penzance has done so much to popularise. They retain the lovely fragrance of the old Sweetbriar, but the blossoms have been greatly improved, the golden anthers giving them a distinct and beautiful appearance; while the flowers are followed by fruits which are equally as decorative. Varieties to be recommended are LADY PENZANCE, soft coppery tint, bright yellow base; MEG MERRILIES, crimson; AMY ROBSART, deep rose; FLOEA McIVOR, pure white blushed with rose; ROSE BRADWARDINE, clear rose.

Amongst Climbing Roses, choice may be made of CRIMSON RAMBLER; FÉLICITÉ PERPÉTUELLE, evergreen, creamy white, with pink reverse; DUNDEE RAMBLER, white, tinted with pink; GLOIRE DE DIJON; MADAME BÉRARD; W. A. RICHARDSON, rich yellow; AIMEE VIBERT, white.

Dahlias would naturally be included in every garden on account of their utility for furnishing cut flowers in late summer and autumn. Great strides have of late been made with these popular plants. The most marked improvement, however, is to be found in the flowers, which are now produced well above the foliage. The Cactus section is the most popular with amateurs, though every section of the family, should be represented if space will allow. The tubers should be inserted the first week in June, and they should be lifted on the first approach of frost and stored in sand until the next planting time. Earwigs are the great enemies to the cultivator of Dahlias, and these must be trapped by means of inverted flower-pots containing a little moss, or rolls of paper. They are night-feeding insects, and therefore in the day they may be shaken from their temporary hiding-places into a vessel of boiling water. The plants must be staked early, and in very dry weather it is a good plan to mulch the roots with partly decayed manure, with a view to conserving the moisture in the soil and to giving the plants a stimulant at a time when the strain upon them is greatest. For list of varieties, the amateur should consult the catalogues of any of the large growers, such as Messrs. Dobbie, of Rothesay.

Chrysanthemums for the decoration of the outside garden are now very numerous, and any of the kinds enumerated under the

chapter devoted to "Plants for Small Greenhouses" may be utilised for the purpose.

Bedding Plants are too well known to need enumeration, and where these are to be employed in conjunction with perennials, such had better be purchased, as the amateur seldom has the convenience for housing them; nor do they in my estimation repay him, so ephemeral is their existence, for the long period over which their preparation, from the cutting or other stage to the time when they are ready for the beds or borders.

Subjects for Town Planting.—Some of the most useful plants for enclosed gardens are to be found in the section known as Hardy Perennials, though Bulbs and Tubers are also exceedingly valuable. Amongst those that can be recommended are the following: Border Carnations, Chrysanthemums, Thrift, Japanese Anemones, Alyssum, Candytufts, Erythroniums, Irises, Convolvuluses, Sunflowers, Wallflowers, Anthericums (St. Bruno's Lilies), Evening Primroses, Larkspurs, both annual and perennial, Snapdragons, Starworts (Michaelmas Daisies), Rudbeckias, Tulips, Winter Aconites, Crocuses, Hyacinths, Asters, Pæonies, Annual Tropæolums, Godetias, Bartonias, Double Daisies, Aubrietias, Inula, *Chrysanthemum uliginosum*, Pyrethrums, Gaillardias, Pinks, and Forget-me-nots.

Aquatic Plants.—The majority of amateur gardeners will probably scoff at the idea of aquatic plants, thinking that such are quite without their undertaking. This is a mistake: the possibilities of growing hardy aquatics are great, and if only the work is taken up in a practical manner, the small pond will form one of the most attractive features of the outdoor garden. In many country gardens small ponds exist, and these, of course, may be utilised to great advantage by any practical man. I was more than ever convinced of the practical utility of the idea when noticing the brave show of the smaller aquatics in such small natural ponds as are to be found at Messrs. Barr's Long Ditton nurseries. But where good accommodation does not already exist, for a small sum a pond can be made of different depths to accommodate a variety of subjects. The work is best undertaken by someone conversant with the use of cement. Of course pipes would have to be

provided by which the water, if necessary, can be drawn off and replenished. In a pond of 4ft. depth, or even a little less, it would be possible to grow some of the finest aquatics we possess, such as the lovely hybrid *Nymphæas* which M. Marliac has popularised; 6in. or 8in. of soil will afford sufficient rooting medium for these aquatic gems, and also of their allies the Nuphars. These would be accommodated in the deeper parts of the pond, while in the shallow parts may be distributed subjects which require less depth. The Cape Pond Weed (*Aponogeton distachyon*) is a great favourite with everybody; its bright green ovate leaves and white fragrant flowers, which float upon the water's surface, always enlist attention. *Villarsia nymphaeoides* is a pretty aquatic whose culture might well be attempted; and the same may be said of that common but pretty weed, the Water Crowfoot (*Ranunculus aquatilis*), whose large strawberry-like blossoms stud our ponds from late spring until summer is well nigh over. It is, however, a very quick grower, and care must be taken to restrict it, or it will assert itself too strongly. There is, indeed, a very large choice of subjects available. They should be planted in spring, and should be weighted with a stone and sunk. Some growers sink pots containing different plants, but the former method is preferable and certainly more natural. If there be a swampy part of the garden close to the pond, this should be utilised for growing such easily cultivated plants as the pretty Buckbean (*Menyanthes trifoliata*), whose sweet-scented flowers, resembling Horse-Chestnut blossoms in miniature, are very distinct; the Common Forget-me-not, and the showy King Cups (*Caltha palustris*) of our marshy meadows. Where expense is no object, there are, of course, choicer aquatics available those enumerated are mentioned chiefly on the score that they are readily procurable and cheap. Even a large tub or a tank which may be bought for a few shillings occasionally may be utilised for growing a few Water-Lilies.

Ferns are necessary adjuncts to the flower garden, as many of them will flourish where flowering plants are quite out of the question. The hardy Ferns are very numerous, those indigenous to Great Britain alone forming a formidable list. There is hardly any need for the amateur to go in for choice exotics, such a wealth of beauty lying, as it were, at his very doors. In forming a

fernery on ever so small a scale, it will be well to imitate as nearly as possible the surroundings such species would occupy in a state of nature. The rockery, if ever so roughly constructed, provided it is properly drained and has plenty of good soil in which the roots can ramify, will be the simplest plan for the novice to adopt. To go at all deeply into the subject of Fern culture would be quite without the lines of the present manual. Those who wish to make a speciality of the subject would be well advised to consult Mr. Druery's admirable little work on British Ferns; or the manual issued by Mr. Birkenhead, Sale, near Manchester.

In making a fernery in the outside garden the work should be carried out in late autumn. The soil best suited for different species naturally varies somewhat. A useful all-round compost would be one in which good loam, peat, sand, and leaf-mould largely enter, though for some of those kinds which one finds growing on dry walls, like *Asplenium Ruta-muraria*, the common Polypody (*Polypodium vulgare*), and *Ceterach officinarum*, similar constituents to those found in a natural state should be provided and the plants accommodated in a very dry part of the rockery. For general cultivation, what could be better than the lovely *Asplenium Filix-femina* (Lady Fern), or *Nephrodium Filix-mas* (Common Male Fern), or even the very familiar *Scolopendrium vulgare* (Common Hart's-Tongue)? Also to be recommended are *Struthiopteris germanica*, the formation of whose fronds has not inaptly been likened to an ostrich-feather; *Lomaria Spicant* (Hard Fern); *Cystopteris montana* and *C. dentata*; and the noble *Osmunda regalis* (Royal Fern). These form but a very insignificant number of the host available, but they will serve to show that variety for which the Order is remarkable.

Lawns.—These form part and parcel of most suburban gardens, and their keeping in order entails not a little care on the part of the owner. The injudicious use of the lawn-mower—the practice of using it with a view to keeping the lawn neat and trim—is responsible for many of the failures that one notes in the summer time. If the mower were less in request and the roller oftener used it would in the majority of cases be better for the turf. Again, grass quickly suffers from periods of drought, and therefore

it is a good plan where possible to freely use the hose. In my own case, however, I find that if the lawn-clippings (untidy though they may look) are allowed to remain during very hot dry weather the roots of the grass will not be so readily injured by sun. The constant use of the broom on the lawn is also beneficial and tends to the production of a luxuriant growth. In spring, too, all lawns require to be topdressed with manure. Ichthemic guano is excellent for the purpose and easily distributed; while this in com-



FIG. 11.—GENTIANA ACAULIS.

bination with soot and finely sifted rich soil is even better. These should be applied during showery weather. It is astonishing what a revivifying influence soot has even if applied alone, and its utility can hardly be overestimated. This annual topdressing, together with the use of lawn sand, will tend to keep under those eyesores in a lawn—plantains, daisies, and other weeds. When from some cause the lawn has worn patchy, this must be remedied either by the insertion of pieces of good turf or by the easier method of sowing

seeds in late summer and autumn. In the latter case the lawn-mower must not be used, otherwise the young roots would be dragged up.

Rockeries.—There are many of the choicer alpinines which, though they thrive but indifferently in the ordinary border, yet will give of their beauty if planted in ever so rude a rockery if that is well drained. Right in the first rank of rockery plants is the lovely *Gentiana acaulis* (Fig. 11). This is best planted



FIG. 12.—*SAXIFRAGA CAMPOSI*.

in a good soil in which has been incorporated some lime rubble. Of great value on account of their accommodating character are the Aubrietias, the best of which have already been referred to under Hardy Perennials. Then there is that minute gem *Arenaria balearica*, so admirably adapted for covering stones; as well as the hardy *Lithospermum prostratum*, a veritable sun-lover, whose blue flowers are always welcome. Amongst the Campanulas *C. turbinata* is a rockery plant of great merit; as is also *Iris*

cristata. The Saxifrages, again, furnish plenty of variety, *S. caespitosa* and *S. Camposii* (Fig. 12) both being very decorative. The Pasque Flower (*Anemone Pulsatilla*) should also be included; while there are, of course, innumerable hardy bulbs and tubers, like the beautiful winter-flowering Cyclamens, that are best accommodated on rockeries. The best of these will be found described in "Popular Bulb Culture."

I cannot, however, refrain from referring more particularly to some few of the bright little subjects which in the early months of the year may be found in full blossom. The actual time of flowering depends upon seasons. First there are the exquisite little Irises, *I. reticulata*, *I. stylosa* (syn. *I. unguicularis*), *I. alata*, and *I. persica*. These are all winter and spring-flowering species. Worthy companions would be *Anemone blanda* (deep blue) and *A. apennina* (sky-blue), *Leucojum vernal*, the early-flowering Star of Bethlehem (*Ornithogalum montanum*), several of the winter-flowering Crocuses, like *C. imperati*, *C. biflorus*, and *C. reticulatus*, *Sternbergia Fischeriana*, and *Eranthis hyemalis*.

CHAPTER III.

ORNAMENTAL TREES AND SHRUBS— WALL-COVERERS.

WE have now come to a part of our subject which by novices is terribly neglected. Though why so little attention should be bestowed upon the ornamental trees and shrubs of comparatively small gardens it is difficult to explain, seeing their decorative value. That there is considerable laxity in the direction pointed out, must be patent to everybody who looks to his garden to provide pleasure the year through. In my opinion, certain shrubs and trees are absolutely indispensable in every garden, as without them in winter it presents but a sorry appearance. Even with those who attempt to grow ornamental trees and shrubs the percentage of failures is great; but they can readily be accounted for. In the first place the subjects usually chosen are quite unsuitable to their surroundings, or they are planted without any due regard to the effect they are likely to produce, or in such a slipshod manner, that they seldom survive more than a season. Indeed, errors in planting are responsible for quite half the troubles the cultivator of hardy trees and shrubs has to encounter.

In small gardens it is not, of course, possible to have an extensive collection of such subjects as those under notice; but it is possible to have those species and varieties which are best adapted to the soil and situation. One cannot grow, for instance, *Rhododendrons* and such-like plants upon soils heavily charged with lime and chalk, or those *ericaceous* gems, the *Andromedas* and their allies, in the cold clayey soils of many town gardens; but given soils mainly composed of peat or good loam, all such plants will flourish with but a minimum of trouble. Again there are many subjects

which while they would succeed admirably, say, in the south, south-west, or west of England, would be killed to the ground if planted in gardens in the far north. To this extent then, at least, must soil and situation be studied when planting on ever so small a scale.

To all borders of any size, shrubs and trees prove welcome additions, not only on account of their own beauty, but also because they go to make up a perfect whole. They give, as it were, the necessary finish to the flower borders by forming a natural background, and maybe hiding from view some unsightly wall or fence which otherwise would obtrude its presence upon the eye. Again, they are permanent features, inasmuch as certain kinds, as well as furnishing a floral display, are even more valuable in winter by reason of the fact that the foliage is evergreen and very persistent. It is subjects such as these which impart a freshness to what would necessarily be dull surroundings, and to gardens in which the ordinary occupants of herbaceous and other borders absolutely refuse to grow. How effective, too, will even a single specimen judiciously chosen prove on a lawn or perhaps in the centre of a bed of mixed subjects! Or, again, of what immense value are many of the smaller Conifers which enliven beds and borders at a time when even the earliest of flowers—the Winter Aconite—has not pushed through the earth! This is a phase of Home Gardening to be yet more extensively cultivated in the future, as it means all the difference between beauty and barrenness. The subjects thus employed may either remain as permanent occupants of beds or borders until such times as they have assumed proportions altogether out of character with their environment; or they may be kept as pot plants and inserted as each successive season comes round, being lifted when the summer occupants are ready for their quarters and stood in suitable places for maturing their growth. Town gardeners in particular are largely indebted to trees and shrubs for the embellishment of their surroundings, and elsewhere is given a list of suitable subjects to meet their requirements. Shrubs and trees are either evergreen or deciduous; and it is by a judicious admixture of these that the best effects are obtainable. Before doing so attention will have to be directed to

Planting.—When should trees and shrubs? be planted is a question often asked. It is an important one to the cultivator, as upon the subjects being properly planted depends not a little his success. The question of planting is one which might very profitably be discussed at greater length than is possible here. All that one, however, can do in a manual of this kind is to generalise. First, then, it may be said that the best time for planting will depend upon the character of the tree or shrub, whether evergreen or deciduous, and to a less extent upon seasons. In very fine years it would be safe to plant until the end of November, though, as a general rule, the planting of all deciduous subjects should be carried out as soon as possible after the leaves have fallen; but evergreens may be planted a month or so earlier and also in late spring, say April. Unless absolutely unavoidable, winter planting must never be adopted, with either evergreen or deciduous subjects; while the latter should never be inserted in spring if the best results are required. Even to this rule there is an exception—in the case of subjects in pots. In all large nurseries certain shrubs which are much in request are kept in pots, and therefore with those it matters not as to season or time, as they can be planted without receiving any noticeable check. When receiving plants from nurseries it is always advisable to get them inserted as soon as possible. The roots are, of course, protected when they are sent, but if the covering is removed and the trees or shrubs are exposed to frost and drying winds, the roots soon get damaged. If immediate planting is out of the question, then the roots should be temporarily covered with soil.

How to plant is the next consideration, and this is very important—quite as important, in fact, as it is in connection with fruit-trees. To excavate the soil to a certain depth and bury the roots all huddled up in a mass is *how not to plant*. The roots must first be examined, and if any are broken in any way, these are better removed. The hole for the reception of the tree should be made large enough at the outset, and every root should be carefully disposed so that all have ample space and do not encroach the one upon the other. I am assuming that the ground has been specially prepared for the reception of the occupants by deep digging or

trenching, and that the hole for each subject has been accurately gauged. The soil at the bottom must not be firm, and it is better if it is worked into a miniature mound in the centre—the part, in fact, in which the base of the plant is eventually to rest. The depth will naturally vary with individuals, but, as a general rule, such subjects require to be planted at a far greater depth than is advocated in the case of fruit. The condition of the soil at planting-time is also important. It must not be at all pasty, but so friable that it can be readily worked under the delicate roots. The roots having been properly covered, a dose of water may be advisable to consolidate them, the necessity for this varying with the texture of the soil. The hole may now be filled in, and if necessary stakes, to prevent the trees from being shifted by strong winds, should be inserted; and a mulch of strawy manure always acts beneficially alike as a stimulant, a conservator of moisture, and a protective covering. The proper disposition of the specimens must be left to individual taste and local circumstances. Plenty of room must be given for them to develop, and their ultimate size must be taken into consideration when planting. Light and air are as essential to the well-being of ornamental trees as to fruit-trees, and this, too, must be kept in mind. At all large firms whence nursery stock is procured, advice relative to the laying out of public or private gardens is given. Most of the larger firms, at any rate—like Barron and Sons, Elvaston Nurseries, Borrowash, or Veitch and Sons, Chelsea—make a special feature of landscape gardening, and for trees and shrubs it would be well to select from their lists. As a general rule, evergreen shrubs with glossy foliage are best for gardens where dust readily accumulates, as they are more easily cleansed than are those with foliage to which dust and other impurities readily cling.

Pruning.—It is somewhat difficult to lay down hard-and-fast lines with regard to this, so much depending upon the individual subjects selected. Deciduous subjects require to be operated upon at a different time from evergreen ones; while the amount of pruning will likewise differ with the tree or shrub, for what would be productive of good with some would be absolutely injurious in the case of others. Take the case of that common but beautiful

plant so often found as a wall plant, sometimes as a bush specimen, and less frequently as a hedge plant—*Crataegus Pyracantha*. To prune this, at least to any great extent, would be to court failure. On the other hand, many shrubs benefit considerably from annual pruning.

The time, again, will vary with different classes of plants. Ivies are best trimmed closely in April; then after the warm spring rains the new bright foliage soon pushes out, and is in splendid contrast to the older leaves which have been retained. Rhododendrons are best pruned about the same time or a little later, and it is astonishing to what an extent they may be cut back. Some may urge that by pruning at a season when the buds are so well advanced this must be at the expense of the flowers. And so it is; but the plants themselves start away much stronger than if the operation were deferred to June or July—the season when a number of the commonest evergreens used to decorate borders and shrubberies are usually pruned. Take, for instance, Hollies, Privets, Aucubas, Box, and many others.

With the early-flowering shrubs it is a fairly good plan to prune them directly their season of beauty is passed. By so doing they will have an opportunity of perfecting their growth, on which the next season's display of flowers depends, before frosts and cold winds set in. It is very important in the case of flowering plants that all weakly and superfluous shoots should be removed, and any which do not allow sun and air to have free play. Symmetry with flowering shrubs is all very well so long as it is not obtained at the expense of blossoms—for the object for which such shrubs are grown is primarily the flower. Too frequently, however, there is more symmetry than floral beauty, and thus half the charm of such subjects is lost. One is constantly seeing this with Lilacs, Guelder Roses, Flowering Currants, and Mock Oranges; and then the complaints that such have refused to flower are loud and long. The fault really lies with the cultivator, who, instead of bringing the same intelligence to bear in the pruning of his ornamental shrubs and trees as he does in the case of fruit-trees, simply shortens this or that shrub in accordance with his own ideas of restriction. The results are imperfectly ripened wood and a scarcity of flowers. In the pruning of shrubs the

cultivator would do well to take a leaf out of the book of the fruit-grower, whose main idea is to avoid congestion of growth, and to remove all dead, dying, and weak wood. And in doing so he has to exercise his judgment considerably, by studying the actual characteristics of the tree under treatment.

Propagation.—There are several methods by which hardy trees and shrubs may be increased, and though this cultural detail is not of much moment to the small gardener, it is of the greatest importance in large establishments, where provision has to be made for possible losses. The subject, however, is too wide to be discussed here except in the most general terms, as it is quite impossible to lay down fixed rules to meet all cases, so much depending upon the nature of the individual plant. Of the methods in general use in the propagation of hardy shrubs there is none more popular than that of cuttings—*i.e.*, portions of plants taken at certain seasons and inserted outside, either in a specially prepared shady border or else in a cold frame or warm greenhouse. Some of the commonest and most useful of shrubs—like Flowering Currants, Mock Orange, Elders, and many *Spireas*—are so propagated. Cuttings of these are taken in early autumn and inserted in the open border; and except for a covering of light litter, should the weather be very severe, they will not require much attention until rooted. Conifers again, particularly those of the shrubby kind, are increased by cuttings; and so are the fragrant Honey-suckles and Jasmines, the Privets, Escallonias and Lilacs. Some cuttings root more readily when taken with a heel; while others simply require to be taken off at a node, or joint. A handlight or a cold frame will facilitate the rooting of the majority of cuttings. Many of the hardiest and best-known evergreens are propagated from the ripened shoots taken in autumn. Familiar examples are the popular *Mahonia Aquifolia* and the well-known *Skimmia oblata*.

Layering is also employed in the propagation of trees and shrubs. Briefly it consists in bending down some of the lower branches, making a longitudinal incision upwards half-way through, and then pegging down the cut portion into light soil, much after the fashion adopted in the case of Carnations. The layered portion will not be ready to be severed from the parent plant for a twelvemonth

Occasionally hardy shrubs are propagated by suckers; while in many cases they can only readily be increased by seeds. With some of the familiar berry-bearing subjects this is a comparatively easy matter. The seed is rubbed in sand to separate it from the mass, and then sown in boxes, stood in a cold frame, or else in the open border, according to the nature of the particular plant under treatment. Less often shrubs are propagated by grafting, as in the case of fruit-trees, but the operation does not find favour with amateurs by reason of the large percentage of failures.

This is necessarily but a very cursory glance at a comprehensive subject; it will at any rate serve to show the many phases of gardening, when entered upon at all seriously.

Selection of Kinds.—In this section there is again a very wide choice of subjects at disposal, and only a very brief glance at some of the more important species and varieties is possible. Any of those enumerated may, however, be considered worthy of a place. The question really resolves itself largely into one of space at disposal and cost.

There are few better-known or more desirable shrubs for small gardens than the evergreen Barberries (*Berberis*). True there is an undoubted sameness about the colour of the flowers, but their foliage and habit are as diverse as they well can be. Apart, too, from their decorative value, they are worthy of attention by reason of the fact that they are easily grown, are certainly not very fastidious as to soil, are free of growth, and are not too large for the ordinary borders. *B. Darwinii* is not only one of the best species in the genus, but also one of the best all-round shrubs that can be found. Its bright orange-yellow flowers are in direct contrast to its small, dark green, often prickly foliage; while its habit is such that the shrub always looks graceful. Further it is not often affected by weather. More robust than *B. Darwinii* is *B. stenophylla* (Fig. 13), whose long, gracefully disposed stems make it desirable all the year round. It is a hybrid and combines all the best qualities of its parents—*B. Darwinii* and *B. empetrifolia*. This is a most accommodating plant, as it will succeed almost anywhere. One frequently finds it growing luxuriantly even in the shade. Another very striking and distinct Barberry is *B. Wallichiana*, with deep orange flowers and glossy, dark

green foliage. This makes a rather taller shrub than the other two kinds named, but it is nevertheless desirable. Another feature of these Barberries is that the flowers are succeeded by pretty berries; indeed, by some *B. Darwinii* and *B. stenophylla* are grown for that purpose alone.

Closely allied to the Berberises—indeed, by some authors included with them—are the Mahonias, of which there are none superior to *M. Aquifolia*. This is a most useful shrub for the



FIG. 13.—*BERBERIS STENOPHYLLA*.

amateur, as it can be readily kept within limits; it has yellow flowers, purple berries, and most persistent foliage, which assumes beautiful tints as autumn approaches. Where a shrub for a shady spot is required, it would be difficult to find anything superior to *M. Aquifolia*, or one of its varieties.

Though usually classed as half-hardy shrubs, the Escallonias are nevertheless sufficiently robust to withstand our winters—in the South and West at any rate. They are more particularly adapted for growing near the seaside; indeed, no collection of seaside plants

would be complete without them. In Guernsey, in particular, they flourish luxuriantly, forming splendid hedges, their bright flowers and deep green foliage making a pleasing combination. *E. macrantha*, red, is a common plant, and desirable as it undoubtedly is, it is surpassed by the newer and more distinct *E. philippiana*, with its abundance of white flowers and smaller foliage. This is a decided acquisition to the list of seaside plants and is by far the hardiest member of the genus. It may be grown as a wall-plant.

Hardy Azaleas and Hardy Rhododendrons are magnificent subjects for gardens of any size, the latter combining as they do gorgeous flowers with elegant foliage. Of the former, the varieties of *A. pontica* are the best for amateurs. Mr. Anthony Waterer has made a speciality of these plants, and his list should always be consulted. In small gardens there is an excellent dwarf-growing Rhododendron, which is very showy and bright sometimes in the declining days of winter. I refer to EARLY GEM. Its precocity, however, not infrequently seals its doom, and therefore it is better to give it the protection, if possible, of a larger shrub. It is a beautiful rosy lilac. Other good varieties of the same class are AMENUM, CINNABARINUM, FRAGRANS, and TORLONIANUM. For these plants a soil largely composed of peat is best, and at any rate a free soil with which there is a good admixture of peat and loam should be selected.

Where early-flowering shrubs are required, there is an excellent choice available. This being so, the fact that such subjects are so comparatively seldom planted is to be deplored. For small borders what could be better than the exquisite *Daphne Mezereum*, whose pretty pink flowers are so conspicuous in early spring? Though commonly stated to require good loam, yet I have had it and known it grow freely and flower profusely in all kinds of soils and in many situations. Again, this hardy shrub and its varieties will succeed in towns, which is a great point in their favour. *D. M. album* is a white form that should not be overlooked, while *D. M. grandiflora* is another excellent free-flowering sort. There is hardly any necessity to call attention to the Naked-Flowered Jasmine as one of the earliest of flowering shrubs. It is very familiar and quite one of the first subjects

to attract attention. There are, however, two or three plants allied to our Lilacs which are frequently mistaken for Jasmynes—the Forsythias. *F. suspensa* is one of the best of the genus, often flowering freely in midwinter, though the usual time is in March. The flowers are bright yellow, and the branches have a graceful drooping habit. As in the case of the Naked-Flowered Jasmine and the Mezereon, the flowers precede the leaves. This species can be most effectively used against a small wall, and in such a position it invariably produces its flowers some considerable time in advance of what it does when grown as a bush. The flowers are larger than those of the Jasmine already alluded to. Almost any kind of soil will grow it well. *F. viridissima* is of more straggling habit, but is a desirable shrub none the less, as it is easily restricted by summer pruning. Reference has been made elsewhere to the utility of *Erica carnea*, one of the earliest of the Heaths to flower, and it is therefore of great value in the borders and beds in early spring. This is one of the plants that may be accommodated in almost any garden, so compact of growth is it. *E. carnea*, or one of its many varieties, will last in flower from the beginning of the year until summer is well advanced. These are amongst the most useful of hardy border occupants.

Not half as much recognised as they should be by lovers of flowering shrubs and trees are the beautiful Japanese Witch Hazels (*Hamamelis*). They are more particularly adapted for shrubberies. The best is, I think, *H. arborea* and its beautiful form *Zuccariniana*. The flowers of the former are deep yellow, while those of the latter are sulphur-coloured, and the two are certainly worth including in any garden having the space. The foliage somewhat closely approximates to that of the Hazel and in autumn assumes a most lovely tint. These Witch Hazels will flower well in almost any soil and are not very particular as to site. The flowers are produced in January, February, and March, depending somewhat upon the season and the situation.

One is frequently puzzled to know what shrubs to plant in a dry, sandy, or gravelly soil. For this the double form of the Common Furze (*Ulex europæus flore pleno*) is pre-eminently suitable. *Amgdalus communis* is a small tree of great beauty, and one, too,

that will blossom in town and suburban gardens. It is one of the earliest to flower, the pink blossoms, which precede the leaves, being very conspicuous. Another early-flowering subject that can be recommended is *Amelanchier canadensis*, a near ally of the Medlar. Its white flowers are borne in April. Though a very old inhabitant of our gardens, it is all too seldom seen. Earlier than either, however, is the chaste *Amygdalus Davidiana alba*, whose lovely white flowers are produced in January in favourable seasons. Belonging to the same genus as the Apple and the Pear are several nice shrubs which may well be utilised for decorative purposes. *Pyrus coronaria* is one: it has pink flowers which are somewhat later blossoming than the *Amelanchier* just noted. A fairly rich, deep soil suits these last two subjects.

Of the trees suitable for gardens of small dimensions, the Japanese Maples are amongst the most decorative, though they are not as hardy as some of the subjects enumerated. They, however, present such variation, alike in form and colour of leaf, that we can ill afford to dispense with them; added to which they are most effective in autumn, their foliage assuming some of the loveliest tints imaginable. They do not require any especial soil, though they give the best results when a fairly rich dietary has been provided. To see these Japanese Maples in perfection one ought really to visit the Kingston Hill Nurseries of Messrs. Veitch and Sons in a sunny autumn. There they form a conspicuous feature, and one finds them contrasting beautifully with the silvery foliage of *Acer Negundo fraxinifolium variegatum*, which is another small tree of great merit and very familiar. Japanese Maples that can be recommended are *Acer palmatum dissectum* (with foliage so marvellously cut that it has been not inaptly likened to the fronds of a fern), *A. p. atropurpureum*, *A. p. lineari-lobum*, *A. p. sanguineum*, *A. p. roseo-marginatum*, and *A. p. septemlobum elegans*.

Berry-bearing shrubs are always appreciated, as the fruits are generally at their brightest in the dullest seasons of the year. And for this reason it is advisable to plant a few of these at least, especially as in doing so one gets from some of them, in early spring, showy flowers or very ornamental foliage. Then, too, it is possible to have quite a number of such subjects in small

gardens, as many are compact and dwarf-growing. Already the Barberries as a family have been praised for their all-round qualities, and certainly as berry-bearing shrubs alone many are specially deserving of mention.

The Aucubas are evergreen shrubs of the first water; and if both male and female plants of *A. japonica* are inserted, a profusion of large scarlet berries will result. These are most useful plants, as they will thrive almost anywhere, their strong evergreen leaves standing them in good stead, as the dust and smoke inseparable from gardens in towns is washed off by every shower. Frequently these shrubs are mistaken for Laurels. *Skimmia japonica* is yet another evergreen with showy berries; indeed, it is for that feature extensively grown, as the berries are at their best in winter.

One hardly regards the *Coniferae* as shrubs yielding berries, yet, as a matter of fact, some of the most useful subjects for small gardens are to be found in the order. Even the Common Juniper (*Juniperus communis*) is not to be despised, and more especially as it is an evergreen. Then there are several others, including *J. japonica* and its golden form.

Allied to the Common Dogwood of our hedges is a small-growing tree known in some nurseries as *Benthamia fragifera*, whose raspberry-like fruits following white flowers are very ornamental. Unfortunately it is not as hardy as one could wish, and it is only in the more favoured parts of England that it will succeed. It is best grown as a wall-plant. Showy, too, are the fruits of the Broad-leaved Spindle Tree (*Euonymus latifolius*). This is surpassed, however, by *E. l. atropurpureus*. The Cotoneasters are pretty berry-bearing subjects, most of which look their best when covering a dwarf wall. Excellent kinds are *C. microphylla*, *C. Simonsii*, and *C. frigidula*. The first two are evergreen, but the last is deciduous. The great charm of these small shrubs or small trees is that they grow freely in any ordinary garden soil. The merits of *Crataegus pyracantha* have already been dealt with. Suffice it to say here that as a berry-bearing shrub it has few equals and no superior; added to which it can be planted almost anywhere. Of great value, again, is *Hippophae rhamnoides* (Sea Buckthorn), one of the best of seaside plants, but sufficiently accommodating to yield its beauty

inland. The berries are amber-coloured, forming a delightful contrast to the silvery-tinted foliage. With the exception of *Skimmia japonica*, and another useful hardy evergreen shrub (*Pernettya mucronata*) which ought not to be forgotten, and both of which do best in peat or peat and loam, none of the kinds enumerated require a special soil.

In gardens it is nowadays not at all uncommon to plant shrubs which yield attractively coloured foliage either in late spring and summer or else in autumn. Where the garden is of sufficient size to enable desirable contrasts to be made, there is ample scope for the gardener with an eye to colour value. The Japanese Maples assume the most gorgeous colours in autumn, as also does the Scarlet Oak, *Quercus coccinea*, *Q. palustris*, several of the wall-plants already alluded to, *Lyonia arborea*, many Azaleas, the Sumachs, and *Liquidambar styraciflua*. To these may be added for effect such a beautiful shrub as *Prunus pissardii*, whose handsome leaves and deep red wood form such a desirable whole, and that ornamental Hazel *Corylus avellana purpurea*. In delightful contrast to such would be the Golden Elder and *Acer negundo fraxinifolium variegatum*. This latter may be had either as a dwarf bush or as a standard, and the growth can be regulated in summer.

Other subjects which in larger establishments might be grown for their autumnal tints alone are *Parrotia persica*, *Berberis thunbergii*, *Euonymus alatus* and *E. europæus*, *Vitis coignetiae* and the Virginian Creeper, *Rhus cotinus* and *R. typhina*, *Betula alba atropurpurea*, and *Acer rubrum*.

Weeping Trees may be so effectively arranged in even small gardens that one cannot afford to omit some notice of them here. In the mind of the amateur the only subject falling under this category is the Weeping Willow (*Salix babylonica*), and useful though this is in its proper place, it is seldom that it can be employed by small gardeners. There are, however, a veritable host of good things which will add not only grace, but beauty to the surroundings, and it is to a few of these that reference will be made. Weeping trees may be frequently employed as central subjects in a large bed or even in the border, but it is as isolated lawn plants that they are often seen to the best advantage.

Though in the majority of instances these weeping subjects are grown for foliage, yet this is not entirely the case. Some of them are grown alike for their habit and the beautiful display of flowers they give—the Weeping Cherry (*Cerasus semperflorens*), to go no further. Again, many of these weeping trees are of great service to those who have exposed positions in their gardens, and frequently in soils which are difficult to accommodate as to subject. For such the Weeping Ash (*Fraxinus excelsior pendula*) is admirably adapted. Nor is it only in summer that many of these trees are ornamental: the winter state of some is almost as decorative. This is very well evidenced by *Sophora japonica*. The Weeping Beech (*Fagus sylvatica pendula*), Weeping Poplar (*Populus tremula alba*), Weeping Elm (*Ulmus glabra pendula*), and many of the Conifers, such as *Abies Smithiana*, are all excellent subjects; while even the Holly contributes its quota of beauty to gardens in the form of weeping trees—the variegated form of the common Holly being distinct, and as elegant as distinct. The double-flowered Cherry, the Purple Birch, and the pendulous form of the Common Larch, are all beautiful.

Wall-Coverers.—In nearly all suburban gardens there are objectionable walls to be clothed, ugly fences to be covered, or unsightly buildings to be masked from view. For either purpose hardy shrubs are absolutely essential if permanence is aimed at. Therefore a consideration of some of the more noteworthy subjects will be useful at this point. It will be noticed that in some cases plants will be recommended to which attention has already been directed. Many of the best subjects for walls, however, may be utilised for several purposes besides—as single specimen plants or even as hedge plants. For instance, one of the prettiest hedges I have ever met with, clad from top to bottom with foliage, and aglow with crimson berries in winter, was entirely composed of *Crataegus Pyracantha*. And so it is with many others.

Few shrubs are better adapted for covering walls facing south or west than the beautiful Ceanothuses, and none are more beautiful than the kinds giving some shade of blue. Some of them, too, are valuable as flowering in spring, while others last

right on to the end of autumn, and furnish an abundance of flowers very useful for vases and other decorative purposes. These shrubs like a fairly light soil, with good drainage, and the only after attention needed is a pinching in summer and a light pruning a little later. Nearly all are quick growers, and if the main shoots are nailed to a wall it is quickly covered. They are propagated by layers in autumn, or by cuttings of side shoots in summer. There are at least half a dozen kinds that can be recommended—*C. azureus*, *C. floribundus* (*C. dentatus* of some), *C. Veitchianus* among species; and such lovely hybrids as GLOIRE DE VERSAILLES, MARIE SIMON, ALBERT PETIT, ARNOLDII, and ALBIDUS.

Upon a shrub so familiar as the Firethorn (*Cratægus pyracantha*) it is not necessary to dwell. Suffice it to say, that it is right in the front rank of wall plants, is evergreen, and will thrive in practically any soil or situation. Almost equally accommodating, but inferior as regards decorative value, is the curious plant known popularly as the Dutchman's Pipe (*Aristolochia Siphon*). Its chief value lies in its large heart-shaped foliage, its flowers being decidedly more curious than beautiful. It is, however, better adapted for covering trellises and arbours. Somewhat resembling the last-named is a plant of almost equal value though not at present much known—*Vitis Coignetiae*. It is a strong grower and very free; its foliage is larger than that of *Aristolochia Siphon* and of good texture. Even in its summer garb it wears a most beautiful colour; but in the autumn its greatest beauty is shown. Then the leaves assume indescribably lovely hues—yellow, red, and purple. Up to the present time the plant has been little grown here, but it only needs to be known for its circle of admirers to be increased.

Charming subjects for walls are the Cydonias, of which *C. japonica* and *C. Maulei* (*Pyrus Maulei*) are very commonly employed, these enjoying a rich, well-drained loam and an aspect similar to that advised for the Ceanothuses. They flower in spring, and *C. Maulei* is very showy afterwards when the flowers have given place to bright yellow fruits. There are a large number of forms of *C. japonica*, white, pink, and single- and double-flowered. These are best propagated by layers in autumn.

Though quite hardy, the handsome *Fremontia californica* is

best given a position on a south or west wall. It is readily trained, and the large, bright yellow flowers and ample foliage in late spring are most effective. Plenty of space should be allowed this plant to develop, and a good, well-drained loam suits it better than anything. Where a quick grower is needed this Californian subject can be confidently recommended. Upon the merits of the Forsythias as wall plants I have already dilated. I have also called attention to the winter-flowering Jasmine. There is, however, one other species of the latter that ought not to be forgotten—*J. officinalis*, the Common Jasmine, whose fragrant white flowers, fugacious though they be, are always appreciated.

A little-known, comparatively, but very desirable wall plant is the evergreen *Berberidopsis corallina*. Usually it is found as an occupant of the greenhouse, but in the South and West of England and in favoured aspects it is well worth giving it a trial. A light, well-drained soil suits it best, and then its racemes of crimson drooping flowers are abundantly produced. The leaves are likewise attractive, being of a rich green and with a glossy surface. It may be increased by layers in late summer or by cuttings in spring. A very distinct plant.

Clematises are amongst the most popular of wall plants, and little wonder, considering their great variety, the long period over which they may be obtained, their ease of culture, and their general decorative value. The only difficulty that presents itself to the amateur with these popular subjects is the method of pruning. A very little observation will, however, suffice to put him on the right track. Some of the species and varieties blossom on the old or ripened wood, while the blossoms of others are borne on the summer shoots. To the latter belong the very popular *Jackmanni* varieties and the *Viticella* varieties; and to the former the equally popular *C. montana*, etc. The last are usually cut back to within a few inches of the soil in late autumn, and the former are lightly pruned by the removal of the weak shoots in spring. For a selection of varieties, the amateur should send for the list of Mr. Geo. Jackman, of Woking, who has done so much to popularise these handsome wall-coverers. The ways in which they can be utilised are almost as varied as the colours of the flowers; and whether rambling over an

informal arbour, a porch, or an unsightly tree-stump, they are equally effective. With regard to culture, they require a light loam, good drainage, and, during very hot weather, a mulching of partly decomposed manure.

A very distinct wall plant is *Garrya elliptica*, whose greenish-yellow catkins are borne in spring. A south aspect and a well-drained site are necessary to grow this plant to perfection. It is easily restricted, and may be increased by layers in autumn. One can pass rapidly over such wall-coverers as *Ampelopsis hederacea* and *A. Veitchii*, because they are amongst the best-known plants of the class to be found in any garden. They are nevertheless indispensable in some gardens, and if given a sunny site their autumn



FIG. 14.—*HEDERA HELIX DONERAILENSIS*.

tints will vie with the choicest found upon any plant in the outdoor garden. The Ivies, again, are too well known to need more than passing mention; they are none the less useful—so varied are they as regards colour and form of leaf, and so accommodating in respect of soil and situation. For covering a wall of red bricks they are indispensable. Some of the best are *Hedera Helix palmata*, *H. H. latimaculata*, *H. H. Donerailensis* (Fig. 14), *H. H. marginata*, *H. H. lucida*, *H. H. Rœgnieriana* (Fig. 15), and *H. H. canariensis*. The last-named is a very quick grower, and on that account is frequently planted. *H. amurensis* is the finest of the large-leaved group, and Emerald Green is the best of the close-growing varieties. *H. atropurpurea* should not be omitted from even the smallest collection of Ivies.

A most invaluable shrub for the amateur to plant against a south wall is the seldom-seen *Elæagnus macrophyllus* ; for besides being a hardy evergreen, it will flourish in the gardens of crowded towns, though it will probably not blossom here. However, it is for its deep green shining foliage with silvery grey underneath that it is chiefly grown. For all that, its flowers are not to be despised, for besides being rather uncommon as to form, they have a pleasant fragrance.

Chimonanthus fragrans, though only suitable for a south or west aspect in a favoured part of the country, must not be omitted from any list of plants suitable for walls. The flowers are yellow,



FIG. 15.—*HEDERA HELIX RÆGNERIANA*.

and very fragrant, and being produced in midwinter are naturally very highly esteemed.

Where a still greater choice is needed, the following might be included :—*Calycanthus macrophyllus* ; *Choisya ternata* ; *Caryopteris Mastacanthus* (Fig. 16), a charming but little-known shrub with lavender-blue flowers in autumn—an excellent subject for a south wall ; *Cotoneaster Hookeri*, *C. microphylla*, and *C. Simonsii* ; *Azara microphylla* ; *Lespedeza bicolor* ; and such Fuchsias as *Riccartonii*, *gracilis*, and *Thompsonii* ; *Passiflora cærulea* and the white-flowered *CONSTANCE ELLIOT* ; the Honeysuckles, of which there are a great variety ; and *Wistaria sinensis*.

Shrubs for Winter and Spring Beds.—As a rule the flower-beds of the majority of gardens, gay though they be in late spring, summer, and autumn, present but a sorry sight with the first touches of frost. In fact, after the summer occupants are



FIG. 16.—*CARYOPTERIS MASTACANTHUS*.

removed it is seldom that any serious attempt is made to render them decorative during the dullest part of the year. This is to be deplored, for, as already noted, there are many shrubs and small trees which may be utilised for relieving the dull monotony that bare beds and borders usually present. It is true that to keep

them at their best entails considerable time and attention, but such is undoubtedly possible. My own plan is to decorate the beds in late autumn with certain Conifers and small-growing shrubs. The former are kept in pots, and thus are readily transferred, and the latter are annually transplanted. This latter operation is the one objectionable feature in the business, and necessarily implies a space well worked being set apart for their reception. Many gardeners transplant both the Conifers and the shrubs. The bulbs which were planted in the early autumn are carefully noted, and the remainder of them are so disposed as to give the greatest effect in spring, bearing in mind, too, the perennial or permanent occupants of such beds and borders. As beds and borders are renovated periodically and occasionally topdressed, very little else is required. One of the finest of the small shrubs is *Andromeda* (of nurseries) *japonica*. The flowers are conspicuous a long time before they really open, and this constitutes one of the charms of the shrub. This is best given plenty of room and a position where sun and air can readily get to the plant. Beautiful of habit and with exceedingly attractive foliage, it is truly one of the best of flowering shrubs. Though thriving best in peat, yet it will flourish in a fairly rich sandy soil; and for that reason it would be well to assign it a position in a small bed accommodating plants requiring similar soils—such as small *Rhododendrons*, etc., the pretty little hardy *Heaths*, *Skimmias*, *Pernettyas*, and *Kalmia latifolia*.

Other beds may be filled with any of the following, planted either as small groups or singly, as fancy may dictate; while for a central subject set in a bed (and a permanent feature besides) *Yucca gloriosa* would be excellent: *Retinospora plumosa argentea*, a silver-foliaged kind; *R. plumosa aurea*, with golden variegated foliage; *R. squarrosa*; *R. ericoides*; *Cupressus Lawsoniana Shawii*, *C. L. Allumii*, and *C. L. alba variegata*, *Cryptomeria elegans*; *Juniperus japonica*; *Thuopsis dolobrata*; *Taxus baccata elegantissima*, with its soft yellow foliage; *Thuya occidentalis Ellwangeriana*, an upright, compact-growing variety; *Biota orientalis semper-aureascens*, with golden yellow foliage; *Euonymus radicans* SILVER GEM; *Aucubas*; the very graceful *Yucca recurva*; the varieties of *Hedera arborea*; *Osmanthus ilicifolius variegatus*; and *Laurustinus*.

Subjects for Town and Suburban Gardens.—The stocking of town and suburban gardens with shrubs and trees not infrequently ends disastrously, the subjects chosen not being such as will withstand the impurities of atmosphere associated with town life. There are, however, a number of trees and shrubs which at any rate will succeed fairly well under the conditions usually obtaining in small town gardens. The Common Almond (*Amygdalus communis*), the Canadian Medlar, the Thorns (*Crataegus*), Aucubas, Berberises, Hollies, Lilacs, Ivies, Philadelphuses, *Osmanthus ilicifolius*, Jasmines, *Aristolochia Siphon*, Flowering Currants (*Ribes*), Spiræas, Privets, *Wistaria sinensis*, Cotoneasters *microphylla* and *Simonsii*, *Cupressus Lawsoniana*, Retinosporas, Thuyas, *Biota aurea*, *Juniperus chinensis aurea*, and the Japanese Bamboo (*Bambusa Metake*). For shady spots nothing is better than *Mahonia Aquifolia*, Box, *Aucuba japonica vera*, *Cephalotaxus Fortunei*, evergreen Euonymuses, Hollies, Privets, Caucasian Laurels, Phillyreas, and Yews.

Shrubs for Seaside Planting.—Of those which may be grown with a fair amount of success are the following :—Variegated Euonymuses, *Tamarix gallica*, Escallonias, Double Gorse, Common Flowering Currant, *Shepherdia argentea*, Snowberry (*Symphoricarpos racemosus*), Laurustinus, *Cupressus Lawsoniana*, Veronicas, Fuchsias, etc.

Hedge Plants.—Where utility and effectiveness are both studied, the Myrobalan or Cherry Plum, planted about 9 in. apart, is unequalled. A beautiful effect can also be obtained by planting the Common Beech, the leaves of which are very persistent and take on a beautiful colour in autumn and winter. It moreover stands clipping well. A mixture of Holly and Quicks makes a capital hedge. Other hedge plants that give good effect are Evergreen Privet, *Cupressus Lawsoniana*, American Arbor Vitæ, Box, and Laurel. It will therefore be seen that alike in evergreen and deciduous plants a good choice can be made.

CHAPTER IV.

PLANTS FOR SMALL GREENHOUSES AND FRAMES.

It is probable that with few exceptions the professional gardener would look with more or less contempt upon the amateur's greenhouse or frame, as only too frequently it presents anything but an inviting appearance. Where the amateur usually makes a mistake is in attempting to grow plants quite beyond his skill, or those anything but suitable for such a structure. My object in the present chapter is, therefore, to indicate briefly some of the most useful subjects for small greenhouses, and, moreover, subjects which may be grown by almost any novice entirely without fire-heat at any time of the year. Such plants, it is true, will not blossom as quickly as those subjected to a forcing temperature, but they will come in flower considerably in advance of similar subjects in the outdoor garden. No effort will be made to separate the plants for greenhouses or frames, as it is essential that they should be worked together, the frames being the recruiting place, as it were, for the greenhouse; and after various plants have ceased blooming, or, in the case of deciduous plants, losing their foliage, the frame is extremely useful. The number of plants suitable for the amateur's cold greenhouse or frame is far greater than most people imagine, and as tastes differ, brief notes are given on some of the best, leaving it to the amateur to select therefrom those that he fancies most.

Azaleas.—All the Ghent, Mollis, and Pontica Azaleas are invaluable, as they produce lovely flowers, are easy to grow, and succeed famously in unheated structures. In fact, they nearly all answer when planted out in the open air. The plants thrive in a

compost of fibrous loam and peat in equal parts, with just sufficient sharp sand to keep the whole porous. The pots must, however, be well drained, the crocks being covered with moss to prevent the soil from being washed amongst them, choking them up. This applies to all pot drainage. When potting, make the soil *very* firm, as all hard-wooded plants are best inserted firmly. A large root-run is not necessary for Azaleas; therefore only move the plants into pots one size larger, or at most only two sizes larger, than they were in before. Water must at all times be carefully given, striving on the one hand to avoid great dryness, and on the other too much moisture at the roots. Whenever the plants are watered, however, see that they have a thorough soaking, so that the whole of the roots are moistened. This applies to all plants. After the Azaleas have done flowering, all seed-pods ought to be picked off, and if the plants are stood in a sunny position outside all summer and carefully watered they will be set with flower-buds for early spring-flowering. On the approach of frost they may be placed thickly in the frames, attending to watering, and as they commence to grow in spring they can be placed in the greenhouse to further develop and open their flowers.

Camellias are perfectly hardy, as may be seen by the magnificent specimens, many feet through, growing in the open air at the Royal Horticultural Society's Gardens at Chiswick. They may be grown in the manner advised for Azaleas, or they may remain in the greenhouse all summer. The following are all good varieties: ALBA PLENA, white; CANDIDISSIMA, white; C. M. HOVEY, scarlet; LADY HUME'S BLUSH, flesh colour; MADAME CACHET, white, blotched with red; and STOREYI, rose.

Cannas are now favourite flowers and of the easiest culture. Any good fibrous loam with a little leaf-mould and sharp sand added will grow them well. They should be firmly potted, and not given much water until they have commenced to grow. In the autumn, when the tops begin to die back, all water should be withheld, and the plants stored away in a cellar or in any dry, frostproof place. About the end of March, or early in April, they should have most of the soil shaken from the roots and be repotted again. As before stated, much watering is to be avoided

until the plants are well started into growth. Later on diluted manure-water given weekly is highly beneficial and calculated to induce the plants to blossom abundantly. So numerous are the varieties that a whole chapter might very well be absorbed in enumerating them. For most practical purposes the following will be sufficient for the amateur at the start:—ALPHONSE BOUVIER, rich purple; ANTOINE BARTON, golden yellow, spotted with crimson; JEAN BART, cherry red; KONIGEN CHARLOTTE, deep red, petals edged with yellow, fine.

Carnations, as well as some of the Pinks, are also worth the amateur's attention, as nearly all the border varieties will succeed in pots of good loam, well drained, taking care not to coddle them at all, but admitting plenty of air in mild weather, and paying proper attention to watering at all seasons.

Christmas Roses.—These are amongst the most useful flowers for small greenhouses, as they blossom at a time when nothing else is available. Though hardy to a degree, their beautiful white flowers are not unfrequently spoiled when the plants are grown outside. If the plants are lifted in autumn and potted up, as is frequently done by nurserymen, growers for market, and such like, they can be brought on in the cool greenhouse. *Helleborus niger altifolius* and *H. n. Maximus* are two good varieties.

Chrysanthemums.—The early-flowering Chrysanthemums are splendid subjects for the amateur, and will grow in any good rich soil. Rooted pieces taken from old plants in April, and potted on about twice afterwards, make fine specimens and produce enormous quantities of blossom. Amongst many varieties the following can be recommended:—ALICE BUTCHER, reddish bronze; BLUSHING BRIDE, rosy lilac; L'AMI CONDERCHET, primrose, beautiful; LONGFELLOW, white; MRS. CULLINGFORD, white; MYTCHEE WHITE, a beautiful white; and TOREADOR, bronze.

Ferns.—Many of our native Ferns are really charming grown under glass, and are well worth the amateur's notice. They are not only ornamental there, but, as has been previously noticed, they are excellent for rooms, standing well for weeks together. A compost consisting of fibrous loam and peat in equal proportions, with a mixture of sharp sand to keep all porous, will grow all the

kinds perfectly well, if due care is exercised as to watering. It cannot be too distinctly laid down that if these Ferns are allowed to suffer from want of water at any time, the fronds are spoiled for the season.

Hydrangeas are all well adapted for cool-house treatment. They succeed best in a compost of three parts fibrous loam and one part decayed leaf-mould. The only attention consists in giving them water and feeding with liquid manure when the plants are in active growth. *H. hortensis japonica variegata* has magnificently variegated foliage. Another grand variety is *H. h. Otaksa monstrosa*, with extra fine flowers.

Myrtles are evergreen plants that always have a pleasing effect in winter, their deep green foliage being much admired at that season. They will thrive freely in the compost recommended for Hydrangeas. The same also applies to Rhododendrons, many of which are very handsome in pots and make a brave show when in full flower.

Bulbs and Tubers stand first amongst subjects suitable for small houses, as they provide blossoms in the dulllest months. A long list of species and varieties might be given, but this cannot be done for lack of space. Those who wish to enter more minutely into the subject will find it dealt with in "Popular Bulb Culture." * Suffice it to state here that Crocuses, Hyacinths, Tulips, Lilliums, Narcissi (including Daffodils), Gladioli, of the *Colvillei* and other sections, Anemones, Calochorti, Ixias, Sparaxis, Babianas, Tigridias, and many others are all suitable. All or any of these ought to be potted in a good rich compost and well-drained pots in November and December. When potted, they should be plunged up to their rims in frames, in coal ashes, covering the whole with 2in. or 3in. of cocoanut fibre. When it is seen that the bulbs, etc., are growing through the mulch of fibre, the plants may be transferred to the greenhouse, and occasionally fed with weak liquid manure. Lilliums will be greatly improved if mulched with well-decayed manure 2in. or 3in. deep when the stems are a foot or so high. If these are liberally treated, the bulbs will increase in size and quality annually, except in the case of Hyacinths and Tulips.

* "Popular Bulb Culture," by W. D. Drury. L. Upcott Gill, 170, Strand, W. C.

Even the latter, if kept growing after the flowers are over and planted out in good soil in a warm situation, will make a nice display outside for some years.

Lachenalias, though of comparatively easy culture and admirably suited for the cool greenhouse, are not at all widely grown. They can be used for either pots or baskets, and when grown in the latter prove very ornamental. The method is as follows: Take an ordinary hanging wire basket, and line the bottom and sides with fresh moss. All over this the *Lachenalia* bulbs may be planted bottom upwards, about 2in. apart. Fill the basket with good fibrous loam, and put in more bulbs at the same distance apart just below the surface of the soil at the top. This should be done in autumn, and from that time onwards ample supplies of water ought to be given. The result of this treatment is that the foliage and flowers not only cover the top of the basket, but also the sides and bottom. The mass of handsome foliage and flowers is always appreciated, and invariably puzzles the novice as to how the flowers are borne at the bottom of the basket.

Primulas.—In *Primula Sieboldii* (*cortusoides*) the amateur has most accommodating plants. The flowers range from pure white to azure-blue, and last in perfection for a long period. All this section are quite hardy; but if grown under glass in a cold frame or greenhouse, the plants not only produce more flowers, but the latter are finer and more delicate in colour. If potted in three parts fibrous loam and one part decayed leaf-mould (or, failing the latter, one part of spent horse-droppings, with a little silver sand), they will stand for about three years without repotting. When the foliage dies down in the autumn, the pots must not be allowed to become dry, or the results will not be good the following year.

Honeysuckles (*Lonicera*).—These are appreciated by everyone, and one or other might with advantage be trained on the back wall ends, or even over the roof of the greenhouse. If planted out or in pots, good fibrous loam with a little spent manure will grow all the varieties, amongst which *L. gigantea*, *L. semperflorens minor*, *L. sempervirens* (Scarlet Honeysuckle), and *L. Sullivanti* are all splendid kinds with handsome flowers borne in abundance.

Veronicas, although not quite hardy in the open, are admirably adapted for cold greenhouses, and will grow and blossom well in such a compost as that recommended for Primulas. Amongst the best kinds are: *V. Andersonii*, *V. A. variegata*, *V. formosa*, *V. glauca-cærulea*, *V. Hulkeana*, and SIMON DELAUX.

Eurys.—Amongst foliage plants for the cool greenhouse, the claims of *E. latifolia* and its variegated variety should not be overlooked, as it forms a handsome bush in pots. It is very effective all through the winter.

Annuals.—Many of the ordinary annuals are excellent for pot culture, and if the amateur has any special favourites he could grow a few in pots, and very often with good results. The flowers are usually purer in colour than those grown outside.

Auriculas.—Alpine Auriculas usually do well in small gardens, and it must be acknowledged that some of the very best of growers have been found in the ranks of amateurs with little accommodation beyond that afforded by a cold frame. In fact, it is astonishing what can be done when once the cultivator has made up his mind what subjects to grow, and to grow them well.

Cypripediums.—Orchids have always a charm for plant-lovers, and for those who can only just exclude frost from their houses and frames *Cypripedium insigne* is the best and most reliable, as it will grow and bloom very well indeed in much less heat than it usually gets. Potting should be done about April, giving good drainage, and employing a compost of three-fourths fibrous loam and one-fourth fibrous peat. Plenty of water is advisable while growing, but the supply should be reduced very considerably during the winter months. Diluted liquid manure is also of assistance when the plant is growing freely, at the same time damping it overhead every morning. There are quite a number of these Orchids that will thrive in a temperature which does not fall below 45degs. in winter, but the species above named is one of the hardiest and should be selected as the first for the novice to try his prentice hand upon.

Miscellaneous Subjects.—The Japanese Maples are well worth growing: their foliage is very attractive all summer and distinct from all other plants. *Coronilla glauca* is quite safe in a

cool house, and when covered with its beautiful yellow flowers, few plants are more admired. The *Cytisuses*, especially *C. Andreanus*, *C. purpureus*, and *C. fragrans*, are splendid in cold houses. *Choisya ternata* is well worth a place in every greenhouse; its handsome deep green foliage and deliciously scented flowers are always liked. In fact, the choice of good things that an amateur may grow is almost endless. Again, many perfectly hardy plants are available if lifted from the open ground, potted, and brought inside to flower. Amongst them *Spiræas*, *Deutzias*, *Primroses*, *Lilacs*, etc., are conspicuous. If these were lifted with good roots just before they commenced growth, and brought into the cold house, they would flower freely. After flowering they could again be planted out in good soil. If a small nursery could be set apart for these plants, it would be a great assistance to the amateur, as he could thus have a reserve to fall back upon.

CHAPTER V.

PLANTS FOR INDOOR DECORATION—WINDOW GARDENING—WINDOW-BOXES.

NEXT to the arrangement of the Flower Garden, the decoration of rooms, window gardening, and the proper furnishing of window-boxes claim most attention at the hands of the occupants of middle-class houses. And rightly so; for if the plants are intelligently chosen and the requisite care is bestowed upon them, there is really no dull season of the year. With most people room plants are extremely popular, and this method of beautifying our homes is happily on the increase. Time was, and that not so very long ago, when the only "plants" to be found in the ordinary household were the hideous monstrosities in paper and wax which by courtesy were termed flowers. All that has been changed, and such abortions have long since been relegated to the limbo of forgotten lumber, to be replaced by foliage and flowering plants which are sufficiently accommodating to put forth their greatest beauty even when confined to the sitting-room of a smoky town. Surely, then, plants which add cheerfulness to the dullest surroundings are worthy of still greater recognition.

Window gardening, again, has also become popular, and to-day there are to be found a host of things which may be utilised through the dullest months of the year to give brightness to our surroundings, and which were undreamt of by the older gardeners. This form of gardening is quite distinct from the embellishment of window-boxes outside, though the latter will also be considered in the present chapter. Window-boxes generally, it must be admitted, show a great sameness, and it is possible to go through street after street and find no more variation than is afforded by the different

arrangement, say, of Pelargoniums, Calceolaria, and Lobelia. Why there should be such a monotony with the host of good things available, it is difficult to explain—except perhaps on the score of facility of filling such receptacles each year at the florists' in the neighbourhood. Then, too, the period of beauty associated with window-boxes is short-lived in the extreme—a few months, then all is over. Seldom is any attempt made to furnish them in winter and early spring, yet by the aid of judiciously chosen evergreens and hardy bulbs and the expenditure of a very small sum, the boxes could be rendered most attractive; while the occupants could be utilised for a number of years if taken care of while the summer plants were in their places. First as to

Room Plants.—With these there is a fairly wide choice—a much wider one, in fact, than is generally supposed. Yet so conservative are many people on this point of decorative effect, that once they have got accustomed to the sight of a particular plant in a house, and they find that it succeeds, they do not care to extend their choice even when some subject which is really suitable is pointed out. This is a pity, as variety in the plants for room decoration is quite as necessary as in the garden. Always Fern or always Palm gets a little monotonous.

In giving a list of suitable plants for rooms, it must not be taken for granted that such is supposed to contain all or nearly all that are available. To enumerate such in detail would occupy more space than can be spared. All that is possible is to give what may be termed the pick of the basket. Nor is it possible to say that this or that plant should occupy the same place in every household. The position of any plant is a question rather of arrangement to suit certain circumstances and therefore of individual taste.

Before enumerating the plants available, it will be well to generalise a little. The life of a room plant very greatly depends upon the treatment it receives. I have known room plants kept in good condition for twenty years, and that, too, without much interference in the way of potting. The great enemy to plants kept in rooms is dust. This must never be allowed to accumulate, otherwise it is quite impossible for the leaves to perform their proper functions. It will therefore be necessary to sponge thick-leaved plants with lukewarm water, taking care that after

the operation and while the foliage is drying they are kept out of the hot sun, or unsightly patches are likely to result. Next to dust come the dry, close, stuffy, gas-laden atmosphere of the average room, injudicious watering, and indiscriminate "airing" (if such a term may be used of the plants). Though to put out certain plants in the height of summer—when, say, a warm, gentle shower is falling—would be beneficial, yet to subject the selfsame plants, as is often done, to the icy blasts of winter or to the cold winds of early spring, is injudicious in the extreme, to say the very least. Another factor to be reckoned with in the life of a room plant is the source of its supply. For instance, people are strongly tempted to purchase the Palm, Fern, or other foliaged plant from the costermonger's barrow because the price is lower than that of the florist in the neighbourhood. The policy is a short-sighted one and is sure to end disastrously. Plants which are hawked about have been got up simply for quick sale. They look the pictures of health when received, but such appearances are deceptive in the extreme, for in a very few days they are practically wrecks. To get good room plants the purchaser should go to a florist in his neighbourhood, as with him the plants are first hardened off to suit them to their change of place. In winter and spring do not use the cold hard tap water. Rain water can be easily stored, and if at the bottom of the tub is sunk a bag of soot, this will be found not only to act as a stimulant, but also to improve the colour of the foliage. Even this water should have the chill taken off in winter—in fact, the water should never be below the temperature of the room in which the plants are housed. In summer it is also advisable to use rain water.

First in endurance, as well as in beauty, are the plants scientifically known as *Aspidistras*, and popularly as Parlour Palms, though they do not belong to the order *Palmæ* at all. They will submit to the heroic treatment meted out to room plants. To cold and draught, heat and gas, they seem equally impervious, if but their few cultural requirements are attended to. The general appearance of the *Aspidistra* is too well known to render any description necessary. It is an evergreen with stout-textured leaves, and no town seems too smoky for it. There are both green and variegated kinds in cultivation, and both have their circle of admirers.

Personally I prefer the green-leaved kinds. The variegated kind not infrequently reverts to the type, and more particularly is this the case when it is very liberally treated. The variegation is more permanent in plants which are somewhat restricted as regards pot room, and subjected to plenty of sun—at least, such is my experience.

Though slow growers, *Aspidistras* attain a large size, even under the treatment they receive in rooms. Usually in such cases there is a desire to break up these plants. This may be done in March. Use good fibrous loam to which a little rotten manure or leaf soil and sharp sand has been added. Pot firmly and keep in a warm, well-ventilated room. The rooting process could of course be facilitated if after repotting the plants could be transferred to a house with a warm and somewhat moist atmosphere. The drainage must be ample, as *Aspidistras* require plenty of moisture. These plants may be utilised for almost any position in the house—hall, staircase, landings, porches, or windows—while as table plants they are also appreciated. Personally I do not believe in repotting until absolutely necessary, either for purposes of increase, or because the plant shows signs of weakness.

A plant whose great value for rooms and the like does not seem to be generally recognised is *Eurya japonica*, a half-hardy ever-green shrub which is sometimes seen embellishing cool houses. It enjoys a peat soil, and may be kept for years if dust is removed by means of sponging. Though not as useful as the *Aspidistra*, it runs that plant very close, while it is at the same time of bolder habit. There is an equally desirable variegated form.

The India Rubber (*Ficus elastica*) Plant is one of those accommodating warm greenhouse subjects which will occasionally lend themselves to decorative purposes in rooms. It has, however, an objectionable habit of shedding its lower leaves, which quite disfigures the plant and is irremediable. For halls, corridors, and rooms *Phormium tenax* or its variegated variety may be advantageously employed; it is very bold of habit, and being endowed with thick-textured foliage, it will withstand an amount of ill-treatment that is difficult to believe. The drainage must be good.

Somehow Palms seem to exercise quite a charm over the

average person in search of a table or other plant. The majority, however, are not constitutionally robust enough to withstand the treatment which indoor decorative plants receive; while, apart from that, they have been reared for quick sale, and only disappoint. There are some few, however, which can be recommended with a fair amount of confidence; but even with these the greatest care must be exercised. They must be sponged with tepid water twice a week, and never be exposed to cutting winds or draughts. *Livistona australis* (sometimes catalogued as *Latania borbonica*), whose broad, fan-shaped foliage (Fig. 17) is fairly familiar, is one



FIG. 17.—LIVISTONA AUSTRALIS.

useful species, and with care will keep in good condition for a long time. Other good species are *Trachycarpus excelsa*, *T. Fortunei*, *Rhapis flabelliformis*, and *Phoenix rupicola*. These do not grow very rapidly, and consequently seldom require repotting. When they do, it is best to entrust them to a nurseryman, who has the requisite heated structure to give them a good start after the check they undoubtedly receive. Firm potting, good drainage, and plenty of sunlight are absolutely necessary for Palms used as room-plants. In severe winters they should also be protected at night by sheets of brown paper loosely wrapped round them.

The merits of *Cordylone indivisa* as a room plant must not be overlooked, for its utility is undoubted. I have had a specimen keep good in a draughty hall, though that position is not exactly the one I would advocate. *Grevillea robusta* is sometimes spoken of as a plant for rooms, but in my experience it is not sufficiently robust for the purpose. *Aralia Sieboldii* (*Fatsia japonica*) gives variety, its shining, leathery, digitate leaves standing it in good stead.

Ferns, again, give us some capital subjects for rooms, though usually the most unsuitable varieties are selected by the novice—Maidenhairs, to wit. It is needless to remark their life is short. Amongst the best Ferns for the purpose are *Cyrtomium falcatum*, with its varieties *C. f. Fortunei* and *C. f. caryotideum*. These all have good leathery fronds, are very attractive, and may be kept in health very easily. They like plenty of water in summer, but this must be withheld gradually as winter approaches. The dust must be removed with a sponge and lukewarm water. They are evergreen in character, a very desirable feature. Less robust than the *Cyrtomiums* just noted, but no less beautiful, is *Polypodium aureum*, the glaucous hue of whose fronds is always remarked upon. This is a very favourite Fern with growers for market. Then there are the exquisite variegated *Pteris cretica albo-lineata* (Fig. 18), and the pretty Stagshorn (*Platynerium alcicorne*), the latter a very good basket subject. Other excellent basket Ferns are to be found in the *Davallias* or Hare's-foot Ferns. Nor need one go to exotics for room plants. There are several British Ferns which might oftener be used for the decoration of our rooms and windows. The Common Hart's-tongue (*Scolopendrium vulgare*), *Lomaria Spicant*, *Asplenium Trichomanes*, and many others. They like plenty of moisture during summer and autumn, when they should be afforded a shady but light position outside. Weak liquid manure improves the colour of the fronds and benefits the roots. The above are selected from a very formidable list, and will be sufficient to meet the needs of all but the most exacting.

Certain of the *Coniferae* are desirable when utilised in a small state for the decoration of rooms. There is, however, not one better or more enduring than the Norfolk Island Pine (*Araucaria*

excelsa), or *A. Cookii*. These can be had from nurserymen, and they give splendid variety. Being slow growers, they do not often need disturbance. These Conifers are distinct and decidedly uncommon.

Where something a little out of the common is required for room decoration, the handsome *Maranta major* (Fig. 19) should be tried. A good, loamy soil and plenty of water in the growing season are its chief requirements; while it must never be placed



FIG. 18.—*PTERIS CRETICA ALBO-LINEATA*.

where the sun's rays fall directly upon it. The plant belongs to the family furnishing the arrowroot of commerce, and so far is comparatively unknown, though when once its accommodating nature is recognised it should prove as popular as the best of the Palms. Deserving, too, of attention as a room plant is *Ophiopogon spicatum*, a very distinct subject. The foliage is narrow but very gracefully disposed, the cream-white variegation rendering it additionally attractive. In summer these plants like frequent

overhead syringings with rain water, when the leathery foliage will prove almost as enduring as that of the popular *Aspidistras*.



FIG. 19.—*MARANTA MAJOR*.

Window Gardening.—This is a phase of Home Gardening which, as has already been stated, has made considerable headway. At one time it was only in cottages that this form of

gardening prevailed to any extent. Now, thanks to the able advocacy of the horticultural press, it has been very generally adopted because its possibilities are known. There are to-day flourishing in sunny windows in many a household plants whose culture, had it been attempted otherwise than in an expensive structure, would have been regarded as little less than madness. There is still room for the extension of the enthusiasm, as though amateurs are much better posted than they were a few years ago in the matter under notice, they do not fully recognise what a number of plants quite incapable of being grown outside may yet be flowered in a sunny window. Take some of the Cactuses, with their marvellously curious stems and gorgeous flowers—flowers, too, quite out of proportion to the size of the plants. These alone constitute a feature, and if for no other reason than their uncommon habit, deserve a place. True, some of them are ephemeral as to their flowers, but their curious stems, perfect marvels of Nature's handiwork in plants, are with us always. There is no fall of the leaf, as with some of the choicest of flowering plants—and therefore no bare stems offend the eye. They are ever fresh, ever interesting, and as easy to cultivate as the gaunt-looking *Pelargonium*, which towers ceiling-wards, and is as a rule, when used as a permanent window plant, devoid of grace and beauty. I propose, therefore, to note some of the spiny denizens of the hot, dry plains of the tropics.

Cactuses, it may be as well to state at the outset, are not all sufficiently accommodating to be grown in a sunny window. Some require an expensive house in order to induce them to put forth their blossoms. There are numbers, however, which will succeed admirably if grown in the manner suggested. First as to their requirements. Good drainage is essential; for if this is not provided, too much moisture is sure to be retained, to the certain rotting of the plant; and though this does not necessarily mean the destruction of the plant (for the sound part, if removed from the diseased, may usually be inserted as a cutting), it means the loss of that plant's beauty for a considerable time. Where such a number of amateurs fail with Cacti is in the matter of watering. They do not stop to think how this or that plant fares in a state of nature, but with an utter want of discrimination they water

the plants at the very time they should be resting, and then wonder why it is no flowers are produced or why the plant has not succeeded. Rather should the marvel be that such plant is alive. It must not be implied from this that all Cactuses require similar treatment in the matter of watering. Far from it. The majority, however, that will be mentioned here may practically be kept without water from September until the end of March. This constitutes their resting period.

The composts suitable for Cactuses differ somewhat, though for those now under consideration a good fibry loam should be the chief constituent. To this may be added sand, and old bricks broken small, with a few lumps of charcoal. Some cultivators, in addition, use oyster shells, and although I have tried them, the results have been equally as satisfactory without such additions. The drainage material must be so arranged that no clogging is possible, and the compost must be dry and made firm. In the case of the kinds here to be considered no water should be given for a week or more after potting, which operation is best undertaken in spring—say, April. Very seldom is it necessary to repot; indeed, frequent disturbance is inimical to the well-being of the plants, and therefore to be avoided. I have had Cactuses in the same pots for years, the charcoal seeming to keep the compost sweet and good. So long as the roots appear to be healthy and there are other signs of the plants being properly nourished, *do not repot*.

In a window quite a large number of Cactuses might be accommodated, especially if a wire stand is utilised. They must have the sunniest position available the year through, as they are in truth children of the sun, and it is absolutely necessary to their growth. At no time should they have cold tap water poured upon them. Rain water, slightly tepid, and occasionally a little soot water applied in a similar condition, are most beneficial. All through winter, spring, and early summer the plants should be kept in the window, removing them only for the purpose of watering. About the middle of July or beginning of August it will be found advisable to transfer them to the open, stand and all, and once a week to subject them to a gentle syringing with rain water, using a fine spray. This will tend to keep down any

insect pests, for, strange to say, some insects exhibit a fondness for Cactuses. Mealy Bug is the chief offender, but a camel-hair pencil lightly dipped in methylated spirit and applied to each insect will soon clear the plants. If by chance any portion of a plant be broken off, such may be utilised for increasing the stock by planting it in a sandy compost, as Cactuses readily propagate by such a method.* They should be brought in each evening, unless a frame is available where they could be located.

For two months this exposure to sun and air is desirable—nay, necessary, if flowers are to be enjoyed ; and, contrary to the popular impression, there is no more difficulty in flowering Cactuses each



FIG. 20.—*CEREUS CESPITOSUS*.

year than the simplest of outdoor plants—providing, of course, the cultural requirements already noted are complied with. Strange to say, some of the finest collections of Cactuses are in the hands of amateurs. In fact, so far as variety is concerned, one of the best collections in this country is at the present time owned by a builder in suburban London, Mr. Prichard, of Forest Gate. From very small beginnings the magnificent collection he now owns has been built up, and this tends to show what perseverance and dogged determination to succeed have done, for be it remembered the collection was started long before the advent of the popular manuals which at present exist.

And now as regards species. First on the list comes, by reason of its familiarity, the popular Rat's-tail Cactus (*Cereus flagelliformis*), whose graceful stems and pretty rose-coloured flowers are most attractive, especially when the plant is used for furnishing a hanging basket. Another *Cereus* well adapted for the purpose in hand is *C. Berlandieri*. It is a dwarf kind with large, handsome, purple flowers, to which the rose-coloured

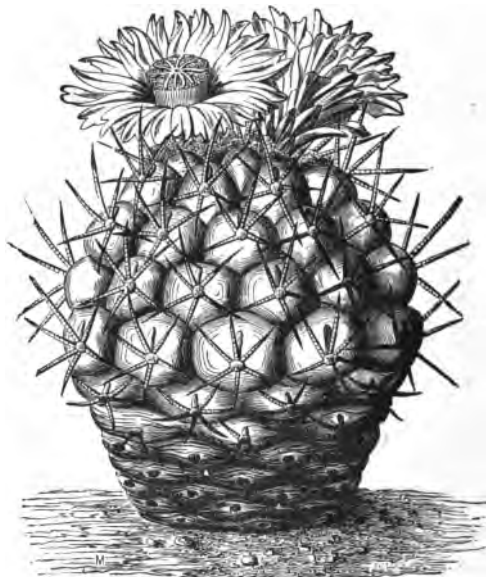


FIG. 21.—ECHINOCACTUS HEXÆDROPHORUS.

stamens offer a splendid contrast. Closely allied to the last-named is the popular *C. Blankii*, deep pink, suffused with crimson. Still keeping to the *Cereuses*, there are the dwarf-stemmed *casiotus*, whose bright rose flowers, borne singly at the end of each stem (Fig. 20), cannot fail to enlist attention; and *C. pentalophus*, rose, fading to white towards the centre. Many excellent window plants are also furnished by the genus *Echinocactus*. Some of the most distinct are *E. hexædrophorus*, whose swollen tubercles and

white and pink flowers are very well shown in Fig. 21; *E. gibbosus*, white, with numerous needle-like spines; and *E. Simpsoni*, an exceedingly small kind, but none the less beautiful, with its cup-shaped, pale purple flowers abundantly produced. The genus *Mammillaria* ought certainly to be represented. One curious though distinct kind is *M. bicolor*, whose fine white spines are such a feature. There are several others, some of which produce rather showy berries.

One other genus should be mentioned as yielding a very large



FIG. 22. ECHINOPSIS PENTLANDI.

number of plants suitable for windows—*Echinopsis*. These must be given a very open, sandy soil, otherwise they will not succeed. *E. Pentlandi* (Fig. 22) or one of its varieties might very well represent these Hedgehog Cactuses, which produce some of the largest and most striking of blossoms.

Some may think the above enumeration a rather lengthy one, and that such a number could not be accommodated. When, however, it is pointed out that many of the species recommended do

not exceed four inches in height, it will at once be evident that with a very little contrivance the majority could be grown.

Variety is equally as necessary in the window garden as in the outside garden; while, of course, Cactuses alone cannot be depended upon to furnish a floral display the year through. In the spring provision must therefore be made for other subjects, of which there is no lack as to either number or variety. One very desirable plant for window culture is *Astilbe japonica* (oftener catalogued as *Spiraea japonica*). To everyone interested in plants



FIG 23. SPIRÆA JAPONICA.

this must be very familiar, as it is so extensively grown for market purposes. It can be grown out-of-doors in favourable localities; but in pots it flourishes admirably and needs but very little attention. Fig. 23 gives an excellent idea of both habit and flowers, the latter being small, pure white, and in graceful panicles. Strong clumps should be procured from a good firm of nurserymen in autumn, potted up in a fairly rich soil, and afterwards plunged into ashes until root action has commenced. They may then be transferred to any room from which frost is excluded. When

the plants are well furnished and the flower-spikes are evident, some assistance should be given in the shape of weak manure-water, and at all times they require plenty of water—in fact, it is a capital plan to stand the pots in saucers of water. As soon as they are past their best, it is wise to transfer the plants to a vacant spot outside, there to mature. Ever then a good soil should be provided, and attention must still be given to watering. This *Astilbe* is readily propagated by division.

In spring there are a large number of bulbs which can be successfully grown as pot-plants. To specifically refer to them is unnecessary. Reference will only be made to a few which should not be omitted from any collection of plants used for window gardening. The best soil for the majority of Lilies consists of equal parts loam and peat, with plenty of sharp sand and a little well-rotted manure. Lilies vary considerably as to size of bulbs, and therefore it is not of much use speaking as to size of pot. It is a good plan to partly fill the pot with soil, then insert the bulbs, leaving their crowns well above the soil. As soon as roots are formed, add the remainder of the compost. Keep the plants moist, and assist the flower-development by the application of liquid manure in some form. Stake when about a foot high. They will benefit greatly at this time by syringing with rain water twice a week. As soon as the blossoms are over, gradually withhold the water; and when the bulbs are ripe lay the pots on their sides in a frostproof house, cut off the decayed stems, and repot when required.

In planting bulbs it is particularly necessary to be careful to get good sound specimens. There are a lot of diseased bulbs on the market, and these are practically worthless. It is therefore always advisable to go to a firm with a reputation. Home-grown bulbs are better than imported ones. As to kinds that can be recommended, *L. speciosum*, and its lovely white form, *L. s. Kratzeri*, *L. longiflorum*, the spotless *L. Harrisii*, the ever-popular *L. auratum*, *L. elegans*, *L. roseum*, and *L. Hookeri*—here is choice enough to suit the most fastidious, and when it is considered that some of these Lilies, apart from their handsome blossoms, exhale a fragrance (as in the case of *L. Harrisii*) that can hardly be excelled, their value as plants for indoors cannot be overrated.

Of course Crocuses, Hyacinths, Tulips, and Narcissi (in which are included Daffodils) will be represented. In the case of the last-named, *N. poeticus* varieties, Polyanthus varieties, and the charming sections known as *Horsfieldii* and Paper White, should be selected. *Chionodoxa Lucilæ* will give a lovely blue; and the striped Squill (*Puschkinia scilloides*) will give variety. Those who are desirous of entering still further into this phase of home gardening I would refer to "Popular Bulb Culture." Here will be found fully dealt with all the popular bulbs, including such favourites for window gardening as the Guernsey Lily (*Nerine sarniensis*), the Scarborough Lily (*Vallota purpurea*), and hosts of others.

Dicentra spectabilis, wrongly classed as *Dielytra spectabilis*, is another gem for window gardening that ought not to be overlooked. A light, rich soil should be provided for it, and plenty of moisture, when its gracefully disposed racemes of rosy-pink flowers will be abundantly produced. A worthy companion for this will be found in the neat-flowered *Deutzia gracilis*. Though, like the *Dicentra* just mentioned, a perfectly hardy plant, yet it is seen in its greatest beauty indoors.

Polyanthuses in variety, the Arum Lily, Common Forget-me-not, Christmas Rose, Ivy-leaved Pelargoniums, certain of the compact Saxifrages like *S. Wallacei*, are all deserving of a place; so also are the Common Musk, the showier Monkey Musk, and the Tuberous Begonias, which last are a very host in themselves. There is, in fact, scarcely any limit to the list of plants which can be accommodated indoors, if but care is bestowed upon them. It is merely a question of individual taste and space at command.

Many of the foliaged subjects mentioned under "Room Plants" will of course be available, and none more worthy of a place in winter than some of the native Ferns to which reference has been made.

Window-Boxes.—In no part of the home garden does there appear to be such an utter want of novelty as in the window-boxes, especially of the middle classes. The reason is not far to seek. The embellishment of that portion of the garden is usually left to the local nurseryman, who not infrequently fills up the boxes to suit the stock of plants he has on hand. Usually the result

is as described in the introductory portion of this chapter. With cottagers the case is somewhat different, and we see far more decorative effect in their window-boxes than elsewhere. This is not a little due to the way floral societies take up the matter and annually award prizes for the best window-box. Frequently, when living in Hertfordshire, I have gone round with the committee of inspection, and have been greatly struck with the good taste invariably displayed by the cottagers. I would not entirely banish the gaudy-coloured scarlet *Pelargonium* or even the yellow *Calceolaria*, but I would suggest relieving the monotony to the eye which these flowers have when so frequently employed.

There is quite as wide a range of choice in this section of Home Gardening as in many of the others; and therefore it simply resolves itself into a question of individual taste. In the first place, the boxes themselves are best hidden from view. Where neatness rather than brilliant effect is aimed at, there is hardly anything to beat the ordinary Common Creeping Jenny, whose yellow flowers, set amidst a wealth of neat greenery, trail gracefully over what is usually anything but an artistic-looking receptacle. Sweet Peas, again, how seldom do we see them employed as plants for window-boxes! Why, it is difficult to say; seeing that they are certainly amongst the best of summer flowers—fair to look upon and refreshingly fragrant. My plan is to sow them early in spring, and when they have made a certain amount of growth they fall over, or can be made to do so by a little gentle persuasion. They may afterwards be kept in place by thin twine of a colour not readily noticed. The tops may be pinched out. There is nothing formal when the plants are so disposed, while if kept watered and the flowers well picked, the flowering season may be considerably prolonged. Where brilliance of colour is the object, then, for the slight outlay entailed and the little trouble necessary to its cultivation, *Tropæolum Fireball* or the brilliant *Spitfire* will do splendidly. No soil can be too poor for these decorative annuals. Another pretty trailer of quite a different character is *Campanula isophylla alba*, one of the gems of a very large family, but one which lends itself admirably to this form of gardening.

There need be no lack of variety in spring, as the bulbs and tubers will furnish plenty of flowers, from the time that the sweet

little Winter Aconite pushes its head out of the soil till the later Narcissi have given us of their best. There is hardly any need to dilate upon the beauties of the graceful Snow Glories (*Chionodoxa Luciliae*), when happily combined with Crocuses, or the equally pretty Siberian Squill (*Scilla sibirica*), similarly employed, all of which should be planted in early autumn. Some of the Anemones, again, may be very effectively employed in window-boxes, for their distinctive foliage is hardly less appreciated than their neat and graceful flowers. Effective, again, because of their pretty marbled foliage and Cyclamen-like flowers, are the Dog's Tooth Violets—all too seldom represented in modern gardens, but as easily accommodated as the commoner bulbs. Of annuals that may be thus grown there is a mighty host—Clarkias, Nemophilas, Collinsias, Silenes, *Erysimum Peroffskianum*, Forget-me-nots, Asters, being but a few, all of which are desirable. The culture of annuals is more specifically dealt with under the Flower Garden proper. Single Petunias may be effectively disposed in window-boxes, and they give a wide range of colour. Wallflowers, again, ought not to be forgotten. The dwarf kinds are especially useful, and may be planted behind the bulbs. They not only give colour, but fragrance. The plants for this purpose may be inserted in late autumn. Two splendid summer climbers for window-boxes are *Cobæa scandens* and *C. s. variegata*.

Many people who do not care for the trouble of fill'ng and re-filling their window-boxes as each season comes round, draft pots of suitable flowers into the boxes, and cover them completely with cocoanut fibre, replacing them with others as the beauty of their occupants fades. The effect, however, is necessarily more formal than when the subjects are disposed in the ordinary way. Where one does not care for the handling of soil for bulbs and such like window-box occupan'ts, Jadoo Fibre will answer just as well. With ladies this soil substitute is very popular.

Begonias are excellent plants for window-boxes, though they do not stand drought like the Pelargoniums. Fuchsias cannot well be dispensed with, as they are showy, easily grown, and with very little trouble kept through winter. In summer Mignonette will give fragrance, and what is more, it will succeed fairly well even in town gardens. The hardy Heaths, like *Erica herbacea carnea*,

E. Alportii, and the white-flowered form of the pretty Cornish Heath (*E. vagans*), are also excellent. These last are very valuable plants, inasmuch as they not only give pretty flowers, but their foliage being evergreen they form a permanent feature, and the bulbs can be effectively arranged amongst them.

In winter there is no need to have bare window-boxes, for though—except in very favoured spots in the South and West—it is almost hopeless to expect any floral display, yet the gardener has to hand some very valuable plants in the Conifers, with their great foliage variation. Some of the silver, golden, or bronze variegated kinds set amongst the soberer green-leaved varieties make a grand display. Many firms (such as Veitch, of Kingston Hill) make a speciality of such plants in pots, and there is plenty of variety to be found among *Cryptomeria*, *Cupressus*, *Retinospora*, *Thuja*, *Abies*, *Juniperus*, etc. Such plants will last for years if taken care of after being returned to their summer quarters.

The possibilities of window-box gardening are indeed great, but in so restricted a space it has been only possible to deal with the subject in a slightly suggestive form.

CHAPTER VI.

THE FRUIT GARDEN.

Essentials to Success.—With wealthy people, who can go to great expense in preparing the soil, building walls, or planting trees to break the force of strong winds and to provide shelter for the crops, the formation of a proper fruit garden is a comparatively easy matter. Not so, however, with the average amateur, whose purse is usually as restricted as is the amount of land at his disposal. The importance, therefore, of making the most economical use of the space at command will be pretty obvious. In order to do this, the first thing is to get the ground in a condition to produce satisfactory crops. He will next have to consider the planting, and in this will have to select varieties exactly suited to the positions which his garden offers. It will not do to have this or that variety simply because it has a good reputation either as a dessert or as a culinary fruit. In every case he will have to be guided by the circumstances already noted. Further, to ensure the best results, there will have to be careful attention to both summer and winter pruning, feeding with both artificial and natural manures, and perfect cleanliness.

Drainage.—Good drainage is most essential to the production of fine crops of all kinds, but is especially so in the case of fruit. In dry seasons bad or indifferent drainage may not exercise a particularly injurious influence upon the trees; but when the wet lies for any length of time about the roots, the tender points, or feeders, die, the soil sours, the tree ceases to grow or crop well, while canker and other diseases assert themselves, and in the end the tree is not worth the room it occupies. On gravelly or other porous subsoils, the natural drainage is ample, and it would be

waste of money and time to drain it further ; but where there is any doubt in the matter, it is an excellent plan to dig holes 2ft. to 3ft. deep in different portions of the garden, and after heavy falls of rain to note if the water drains away from them in a few hours. If it does, the drainage is good ; whereas, if the contrary is the case, and the water remains in the holes for a day or more, it is evident that the drainage is not satisfactory and needs remedying. Many amateurs have an idea that drains impoverish the soil, and therefore are somewhat of an evil. Science, however, has proved that well-drained land is warmer in winter and cooler in summer, as well as moister, than undrained land, and therefore infinitely to be preferred for all crops.

Planting is the next process, and on the way this is carried out not a little of the future success of the trees depends. In the first place the soil should be deeply dug, and the holes or sites for the trees made larger than the spread of the roots. The bottom and sides of the hole should also be well broken up, particularly if the soil be of a close or heavy nature, thus permitting root-extension and the free passage of water from the roots.

Deep planting should be most carefully guarded against, as it is a most fruitful source of disaster. The roots of the trees should be spread out evenly, and fine soil carefully worked amongst them. Some of the top roots should be raised near the surface, so that when the operation of planting is completed such roots are not more than 2in. or 3in. deep. The soil should be made thoroughly firm about the roots, levelled nicely, and a mulch of litter added directly after planting. This mulching is of far more importance than the average amateur is aware, as it keeps the soil uniformly moist, and therefore more favourable for fresh root-action. Each tree should be carefully staked as planted to keep it in position, and to prevent its being disturbed by strong winds. Between the tree and the tie a piece of leather, tuft of grass, or similar soft substance, should be placed, in order to prevent injury to the bark by the tie. This protective substance will need to be examined periodically to see that it has not shifted.

Positions for Trees.—Some judgment is necessary in planting even a small garden, or serious mistakes may be made. If the

garden has an exposed side, first Damson or Nut trees should be planted on that side, as not only are they hardy and fruitful, but they also act as breaks to the wind. Apples or Plums should come in the next position, as they are much hardier than Pears, which should be assigned the warmest place, being easily injured by cold when in blossom. Black Currants and Raspberries should have the lowest moist situation in the garden, as they may be truly said to revel in a cool and fairly moist soil. If part of the garden is shaded, Black Currants will succeed better there than any other fruit bushes. Gooseberries and Red and White Currants will answer in almost any other position that is available, but where birds are troublesome it is advisable to plant all three together. By this plan it is far easier to protect the bushes by covering them with nets.

Form of Tree.—In all small gardens bush or pyramid trees are the kinds to plant in the open quarters. They possess numerous advantages over standards or half-standards. First, they occupy much less space; then they commence to fruit practically at once; they are less exposed to gales, and easier to prune; the fruit may be more readily gathered from such a form of tree; and finally insect and other pests are more easily dealt with.

Nearly all Apples, Pears, and Plums succeed admirably upon these trees if properly pruned. Gooseberries and Red and White Currants should be bushes with a clean stem or leg at least 1ft. long, thus keeping the branches and fruit from the soil and preventing disfigurement of the latter by heavy storms. Black Currants should be encouraged to throw up young growths from the base annually; consequently there would be no advantage in having bushes with a leg or stem. Raspberries when received from the nursery have long canes; these should all be cut down to within 6in. of the soil when planted. This may seem somewhat drastic treatment, but it is best, as stout canes are produced the following year, which rarely occurs if the canes are not cut when newly planted.

For covering walls the fan-shaped trees are the best for fruits like the Peach, Nectarine, Cherry, and Plum, although the last-named answers admirably as Cordons. Pears succeed best as

Espalier or Cordon Trees ; while Gooseberries and Currants may also be grown to perfection as Cordons. On south or south-west walls Peaches and Nectarines succeed well, say, south of the Trent. On east walls or on west walls, Pears, Cherries, or Plums will answer ; while even on north walls, Morello Cherries, May Duke Cherries, and some of the early varieties of Plums give good crops.

Distance to Plant.—Overcrowding in planting or in growth is a mistake that amateur fruit-growers frequently make, and it should be carefully guarded against. Bush or pyramid Apple, Pear, Plum, or Cherry trees should *never* be planted less than 6ft. apart ; while if 8ft. each way can be allowed the grower will be amply repaid by the extra ground utilised. Gooseberries, Currants, and Raspberries may range from 4ft. to 6ft. between the rows. Fan-shaped or espalier trees on walls should be allowed 18ft. or 20ft. between. Cordon trees on walls, either Pear, Plum, or Apple, will have ample room if 18in. apart be allowed, having the trees at an angle of 45deg. and with the head towards the north. Cordon trees trained as an edging to the sides of paths, on wires 18in. from the ground, should be given from 6ft. to 8ft. between. Strawberries may be planted 2ft. apart each way, or 3ft. between the rows and 1ft. apart in the rows. This is a matter of individual choice.

Best Time to Plant.—If possible new Strawberry-beds should be made and planted early in August. The soil for them should be rich and made firm. Fruit-trees, of whatsoever kind, are best planted as early in November as the state of weather and the ground will permit. Avoid planting when the soil is wet and sticky.

Best Varieties.—The importance of the most careful and rigid selection cannot well be overestimated, and nowadays amateurs pay a great deal more attention to it than formerly was the case. The following lists of fruits will be found reliable on almost all soils at all suited for fruit culture, and with proper attention will produce satisfactory crops :—

Apples—Dessert.—As a large collection of Apples is neither requisite nor desirable, only twelve Dessert and twelve Culinary will be named, and these are placed in each case in the order of

ripening. **MR. GLADSTONE**, very early, handsome, fair quality, good bearer; this variety should be eaten as soon as ripe. **LADY SUDELEY**, early, large, handsome, good quality, and free bearer. **DEVONSHIRE QUARRENDEN** (vulgarly called Quarantine) early, medium size, handsome, excellent quality, very prolific. **AMERICAN MOTHER**, large, handsome, free bearer, and probably the sweetest Apple in cultivation; it succeeds best in a warm or sheltered position. **WORCESTER PEARMAIN**, large, very handsome, good quality, and a great cropper. **MARGIL**, small, but of high quality, and a constant bearer. **COX'S ORANGE PIPPIN**, medium size, handsome, and of the finest flavour; this variety should be found in every garden. **RIBSTON PIPPIN**, large, well known for its fine flavour, moderate bearer. **KING OF THE PIPPINS**, medium size, handsome, a good and fruitful variety, ripening at the same time as the last two named. **EGREMONT RUSSET**, large, of high flavour, and a free cropper. **DUKE OF DEVONSHIRE**, medium size, of excellent flavour, and very prolific. **STURMER PIPPIN**, medium size, good quality, and a free bearer. The above-named varieties will afford a succession of dessert Apples from the end of July to the middle of the following June, if gathered and stored properly.

Apples—Culinary.—The following varieties are all good and ripen in the order named: **WHITE TRANSPARENT**, very early, and prolific. **ECKLINVILLE SEEDLING**, large, early, and a splendid bearer; one of the best. **GOLDEN SPIRE**, large, a free and regular cropper. **POTTS' SEEDLING**, large, and a heavy bearer. **BISMARCK**, large, free bearer. **YORKSHIRE BEAUTY**, large, very prolific. **NEWTOWN WONDER**, a new variety of great merit. **BRAMLEY'S SEEDLING**, large, and a good, constant bearer. **ALFRISTON**, large, good bearer. **LANE'S PRINCE ALBERT**, large, handsome, and a great cropper; one of the finest late Apples in cultivation. **DUMLOW'S SEEDLING**, medium size; a well-known prolific sort. **STRIPED BEEFING**, large, good cropper.

Pears.—In the following varieties will be found varieties of fine melting flavour, and free bearers as bush trees. **BEURRÉ GIFFARD**, August. **CLAPP'S FAVOURITE**, end of August. **WILLIAMS' BON CHRÉTIEN**, early September. **BEURRÉ D'AMANLIS**, September. **LOUISE BONNE DE JERSEY**, early October. **BEURRÉ HARDY**, October. **MARIE LOUISE**, early November. **MARIE**

LOUISE D'UCOLE, November. DOYENNE DU COMICE, end of November; this is the finest variety of all. WINTER NELIS, December. JOSEPHINE DE MALINES, December and January. EASTER BEURRÉ, February and March. In cordons the under-mentioned can be recommended, and as these only need planting 18in. apart against walls, a great number of varieties may be grown. As previously, the varieties are placed in the order of ripening. BEACON, CLAPP'S FAVOURITE, SOUVENIR DU CONGRÉS, LOUISE BONNE DE JERSEY, BEURRÉ SUPERFIN, BEURRÉ HARDY, DUCHESSE D'ANGOULÊME, BEURRÉ BOX, DOYENNE DU COMICE, DURONDEAU, PITMASTON DUCHESS, THOMPSON'S, BEURRÉ DUMONT, BEURRÉ D'ANJOU, WINTER NELIS, CHAUMONTEL, MARIE BENOIST, and EASTER BEURRÉ.

If it is desirable to plant espalier trees, any of the above-mentioned varieties of Pears will answer.

Peaches and Nectarines.—As already stated, fan-trained trees are much the best form, and as a large collection of varieties is not required, the Peaches named below will be found to give an excellent succession of fruit. WATERLOO, large, bright red on exposed side, good flavour, and very early; hardy and prolific. DAGMAR, large, highly coloured, fine juicy flavour, hardy and a good bearer. RIVERS'S EARLY YORK, large, highly coloured, and of delicious flavour; one of the hardiest and best varieties. CRIMSON GALANDE, large, fine variety. DYMOND, large and excellent in every way. BELLEGARDE, probably the richest flavoured and best of all late Peaches. In Nectarines, half a dozen varieties should suffice, and those enumerated are in their order of ripening. EARLY RIVERS, large, fine colour, and remarkably early, frequently ripe outside in the middle of July. RIVERS'S ORANGE, medium size, handsome, and great bearer. DRYDEN, large, free cropper, one of the best. BYRON, large, handsome, and heavy bearer. VIOLETTE HATIVE, large, very prolific and good. MILTON, large, fine colour; an excellent variety.

Plums.—All the following varieties will produce heavy crops of fruit on bush, pyramid, cordon, or wall trees. Dessert: OULLIN'S GOLDEN GAGE, TRANSPARENT GAGE, RIVERS'S GOLDEN GAGE, LATE GAGE, KIRKE'S, JEFFERSON, WASHINGTON, McLAUGHLIN

GAGE, DENNISTON'S SUPERB, and COE'S GOLDEN DROP. Culinary : EARLY FAVOURITE, CZAR, BELLE DE LOUVAIN, COX'S EMPEROR, DIAMOND, GRAND DUKE, VICTORIA, POND'S SEEDLING, MONARCH, and WYEDALE, the last-named for very late supplies.

Cherries.—The Cherry is always a most popular fruit, and a few trees should be planted in every garden. For walls : EARLY RIVERS, large, black, fine flavour, and a great cropper ; one of the best. FROGMORE EARLY, large, pale yellow, mottled with red, rich flavour ; a hardy and free bearer. BIGARREAU DE SCHREKEN, large, black, delicious flavour ; a free cropper on a south or west wall. EMPEROR FRANCIS, large, bright red, fine flavour ; one of the best late Cherries. On north walls, MAY DUKE, LATE DUKE, and MORELLO Cherries will produce good crops. The varieties hereunder named will answer well as bush trees, being hardy, healthy, and prolific : MAY DUKE, NOUVELLE ROYALE, ROYAL DUKE, BELLE DE MAGNIFIQUE, and the MORELLO. It may be stated that all Cherry trees, and particularly bush trees, should be summer and autumn pruned, as winter pruning is liable to cause gumming.

Apricots.—On some soils Apricots are very plentiful, especially on those containing plenty of lime and potash, which can be readily supplied where such elements are lacking. Light soils will be greatly improved by the application of the above constituents for Apricots. MOORPARK, SHIPLEY, and HEMSKIRK are all good sterling varieties, succeeding on almost any warm, sunny walls.

Figs.—In many gardens Figs would ripen heavy crops of fruit if planted in firm soil and against warm walls. A rich soil should be avoided ; but when the trees are bearing good crops, diluted liquid manure would be highly beneficial. For outside planting these varieties can be recommended, particularly in the South and West of England and the warmer parts of the Midlands : BROWN TURKEY, BRUNSWICK, and WHITE ISCHIA.

Currants.—Practically all kinds of Currants will grow and bear freely in every garden. Red : CHERRY, RABY CASTLE, and COMET. White : WHITE DUTCH and the COMMON WHITE. Black : BALDWIN'S, BLACK NAPLES, and LEE'S PROLIFIC. The above are all of proved worth in different soils and situations.

Gooseberries.—Good size, quality, and free croppers are

characteristics of the varieties which follow :—Red : WARRINGTON, WHINHAM'S INDUSTRY, FORESTER, CROWN BOB, YOXLEY HERO, and LION'S PROVIDER. White : WHITESMITH, LADY LEICESTER, ANTAGONIST, SNOWDROP, EARLY WHITE, and MAYOR OF OLDHAM. Green : KEEPSAKE, RANDOM GREEN, HEPBURN PROLIFIC, GREEN OVERALL, ROSEBERRY, and THUNDER. Yellow : EARLY SULPHUR, YELLOW BALL, CATHERINE, LEADER, MOUNT PLEASANT, and GIPSY QUEEN.

Grapes.—If planted in the warmest position against the house, or other warm walls, ripe grapes may be secured most years outside. For this purpose MOORE'S EARLY and ROYAL MUSCADINE are the most suitable.

Raspberries.—One of the finest and best varieties is SUPERLATIVE. This is followed by NORWICH WONDER and FILL-BASKET; while if a late supply of fruit is required, such can be obtained by planting OCTOBER YELLOW.

Strawberries.—The varieties of this popular fruit are so numerous as to be positively bewildering. A good selection, however, will be found in ROYAL SOVEREIGN, PRESIDENT, SIR JOSEPH PAXTON, and VEITCH'S PERFECTION. The last is a grand late variety. These varieties have been enumerated in their order of ripening.

Manuring.—With the exception of Strawberries, manure is not advisable when planting fruit-bearing trees or plants, doing more harm than good; but heavy manuring and deep digging are very desirable when making a new strawberry-bed. All newly planted fruit-trees or bushes should have a mulch, as previously advised, of litter or strawy manure to protect them from frost and drought. In fact, this plan of surface mulching as the trees become established and bearing crops will be found better than digging manure into the soil and injuring the best surface roots.

A combination of artificial and natural manures is without question the most beneficial, and yields the best results. Any of the prepared manures, as widely advertised, may be applied at the rate advised by the makers, working the same into the soil with a Dutch hoe or a rake, and then applying a mulch of stable or farm-yard manure. There need be no fear as to the promotion of rank growth (a common but very erroneous impression prevailing

amongst amateur gardeners). The crop of fruit will prevent that, while its size and flavour will be greatly improved by the adoption of such liberal treatment. Another advantage is that the strength of the tree is maintained, and if the seasons are favourable, good crops will be the rule annually. If there is no crop, then manure in any form is unnecessary, unless the trees are weak and really need stimulants to induce energy and strength.

Disbudding.—As a rule, disbudding is only practised with Peach and Nectarine trees, which always produce far more shoots than are required. These are gradually removed when an inch or so long, retaining only those which are best placed and required to fill blank spaces, thus forming a well-proportioned tree. The disbudding should not be done all at once, but spread over several weeks, so that no undue check is given by the removal of too many buds at once. A little practice and judgment will soon enable a novice to disbud the trees properly; or if in doubt, any local gardener of repute would be willing to give him a lesson.

Pruning.—The proper pruning of fruit-trees is an important operation, and in the case of young stock means just the difference between well-formed or ill-shapen trees in the future. Taking bush Apple, Pear, Plum, or Cherry trees first. These should be carefully watched during the summer months, and any shoots growing towards the centre of the tree or crossing each other should be shortened back; while any other leading shoots rushing beyond others ought to be pinched back, so that all the growth is even and the tree well proportioned all round. Overcrowding of shoots at all times ought to be avoided, and the growth so regulated that each part of the tree receives its share of light. This also applies to bush Gooseberry and Currant trees; and if acted upon, good crops of fruit upon well-proportioned trees would be the result. With bush trees, no definite shape is followed; but with pyramid trees more care is required to ensure a shapely tree. A straight stem is essential, and the pruning is done in such a manner that the growth tapers from a centre point downwards, each side being the same and the whole forming a fine pyramid. The pruning is best done in summer, as it can then be seen if any shoots are best cut back or entirely cut out, taking care to have

no congestion in any part of the tree. These strictly formed trees cannot be strongly recommended, as such formality is always at the expense of the crop. Of course some fruit is obtained, but nothing like the quantity on the less trained and therefore more natural bush.

Wall trees should have the lowest branches trained first, not troubling about the centre filling up; that will follow afterwards without any trouble; but when good side branches are formed at even distances, very little will be needed beyond filling up blanks and summer pruning in of all useless shoots to three eyes or so. If this is done as often as necessary, very little winter pruning will be called for. The end of July is a good time to prune first, not before. The next summer pruning will be about the end of August or early in September, according to the season and the growth made. No hard-and-fast rule can therefore be laid down.

This system of summer pruning applies to all wall fruit-trees, and in a lesser degree to other forms of trees in the open garden. By a judicious method of pruning at the season already referred to, large fruit of fine flavour is secured; while the energies of the trees are far more conserved than in the case of trees which are allowed to grow wild, necessitating heavy or severe pruning in winter.

Raspberries should be pruned immediately all the fruit is gathered, cutting out all the old canes and most of the weak canes of the current year's growth, and leaving six or eight of the strongest and best placed canes to each crown. This will be ample. If more were left, the overcrowding would defeat the object of the cultivator by producing less fruit of inferior quality. As far as is possible, all prunings should be burnt at the earliest opportunity and the ashes returned to the soil.

Town Gardens.—In all town gardens, the various sorts of Gooseberries and Currants named will succeed admirably. In fact, all varieties of Gooseberries and Currants answer more or less well in town and smoky gardens or districts. At the same time, it is always best, as far as possible, to grow the choicest varieties. Amongst Apples, POTTS' SEEDLING, KESWICK CODLIN, STIRLING CASTLE, GOLDEN NOBLE, and BRAMLEY'S SEEDLING are excellent culinary sorts. WORCESTER PEARMAN, KING OF THE PIPPINS,

Cox's ORANGE PIPPIN, and KING HARRY are the best dessert varieties for town gardens. Practically all varieties of Plums will grow and fruit freely ; and the same may be said of Pears and all other fruits mentioned and recommended, with the exception of Apricots, which seem to like a purer atmosphere than most, and seldom succeed in a satisfactory manner in a town garden.

Though what has been said in this chapter is but a necessarily brief *résumé* of a very vast subject, it will, I think, be sufficient to put the novice attempting the culture of fruit for the first time on the right road. Practical experience, combined with the reading of good works upon the subject, such as Mr. S. T. Wright's "Fruit Culture for Amateurs," * Mr. J. Wright's Manual, and others, will do the rest.

Insect and other Pests.—There is yet one other subject to be dealt with in connection with the culture of fruit—insects and other pests. These are foes that the beginner and the professional alike have to face, and though space will not allow of anything but a cursory glance at some of the commoner and more destructive pests, yet it would not be fair to present to the amateur only one side of the picture. As briefly, then, as possible, I will dismiss this part of the subject, referring those who wish to go into it more deeply to the chapters in Mr. S. T. Wright's book, to which reference has already been made.

No garden is too small or too towny to contain its quota of insects, and many foes are now asserting themselves in quarters quite unknown to the old-time gardener. The fact is, man, by various means, has somehow or other managed to disturb the true balance in Nature, and he is suffering accordingly. Before referring to any of the pests which even in small gardens are likely to be met with, it will be well to advise the purchase of one of the syringes with fine and coarse sprays ; a stock of such common but useful insecticides as are on the market and have proved their worth ; and two or three stiff brushes as used by painters. Far more useful than a syringe would be the excellent Knapsack sprayers, of which Vermorel's is an excellent type. This, however, is beyond the purses of small owners.

* "Fruit Culture for Amateurs," by S. T. Wright, London : L. Upcott Gill, 170 Strand, W.C.

Of the insect pests which are very destructive and practically ubiquitous is the American Blight (*Schizoneura lanigera*), or Woolly Aphis, whose white, fairy-like threads give abundant evidence of its presence. Winter is *the* time to fight it, though it must not be allowed to go unchecked at any time. One of the cheapest and most effective insecticides is Calvert's Carbolic Soft Soap well brushed in. In summer the pests may be syringed with a preparation of the soap (1oz. to 1gall. of water). This preparation will also tend to make the leaves distasteful to many other insects, and particularly the Apple Blossom Weevil, which in summer feeds upon the foliage of the tree whose blossoms in the spring provided the larvæ with the necessaries of life.

Of all the insects which infest the Apple, the Codlin Moth is one of the most harmful. No one who takes up fruit-growing is likely long to remain in ignorance of this depredator. The most effective way of dealing with it is by means of Paris green when the fruit is very small. This preparation is very poisonous, and must be distributed very finely, and used at the rate of 1oz. of the Paris green to 20galls. of water, keeping the mixture well stirred. It is the larva of this moth that is frequently discovered feeding upon the pips of apples which have fallen. Needless to say, all fallen apples showing indications of being infested should be given to pigs, or else so utilised that the maggots will be destroyed.

Almost equally destructive as the Codlin Moth, and decidedly more difficult to deal with, by reason of the prolificacy of the creature, is the Winter Moth (*Cheimatobia brumata*), whose greenish-yellow larvæ, striped with white, may be found in spring swaying in mid-air by means of gossamer-like threads, on which they have lowered themselves. In the case of standard trees grease-banding is the plan usually resorted to, but with low-growing trees this is of no use. Spraying with Paris green directly the buds commence to open is very effective; while a little later Killmright may also be beneficially employed.

There are numbers of other Apple pests, none of which should be allowed to obtain a foothold. Prompt measures in dealing with any insect are what are needed, and where an insecticide is called for, see that it is employed of the strength advocated.

Pears, like Apples, have many foes, but none which are commoner or more objectionable than the slimy, slug-like creature (Slugworm) which often in summer destroys the foliage of the trees. At first it is blackish, and finally changes to yellow; it is $\frac{1}{4}$ in. long. This is the larva of a species of Sawfly (*Eriocampa limacina*). Freshly slaked lime dusted over the infested trees will tend to give relief; while as a means of prevention, the soil beneath should be turned over with a view to disclosing the cocoons of the pupæ to the eyes of birds.

Gooseberries and Currants are also much attacked by insect pests. The chief offenders, however, are the larvæ of the Gooseberry Moth (*Abrazas grossulariata*) and of the Gooseberry and Currant Sawfly (*Nematus ribesii*). Soft soap syringed on in early spring will render the young leaves distasteful; while the soil under the bushes should be dressed with lime and soot carefully worked in twice or thrice in winter. Hand-picking, too, will considerably reduce their numbers. Dead leaves from infested trees should also be collected and burned.

Each year that Black Currant foe, the Currant Bud Mite, asserts itself more strongly, to the certain detriment of the crop. The presence of this minute pest is manifested by the abnormally large buds in autumn and early spring. These should all be taken off and burned; while if the bush is severely attacked, nothing short of uprooting will prove of any real service.

Canker is a term which with gardeners is not infrequently misapplied. The gaping wounds found upon certain trees are very familiar. Some are caused by frost, hailstones, and other external agencies. What the gardener, however, has chiefly to guard against is the Canker-fungus (*Nectria ditissima*), which is very common on Apple trees, the groups of deep red spots being readily visible by the aid of good lens. When these are present in the buds, any of the advertised fungicides should be employed at as early a stage as possible.

I have just briefly enumerated some of the commonest and most destructive foes to fruit. Many more will doubtless come under the notice of the observant gardener, whose aim should be cleanliness, promptness in dealing with insect foes, and so managing his trees that light and air can get into them.

CHAPTER VII.

THE KITCHEN GARDEN.

Drainage.—All that has been stated concerning the advantages of good drainage for fruit-trees is equally applicable to vegetable crops. The latter have a much shorter life, and on many soils it would be absolutely impossible to obtain really good vegetables unless the drainage were good, as, for instance, on heavy land liable to become water-logged after heavy rain. Even when such land has been drained, it is quite possible, and frequently occurs, that the drains are not so serviceable as they ought to be. This is caused by annually digging the ground only one spit deep. In this way a hard part, or pan, is formed, difficult for water to pass through in wet seasons, and which quickly bakes and cracks in dry ones, thus rendering it very difficult indeed to get even fair crops of vegetables. To counteract this evil, it is a good plan to trench the ground 2ft. deep, every two or three years, breaking up the bottom or subsoil as well, and incorporating strawy manure, vegetable refuse, burnt rubbish, etc., to make the whole more porous. At first sight, the labour trenching involves may appear too great to be undertaken. If, however, a part of the garden is done each year, the labour is not felt, while the advantages to be derived are unquestionable.

Trenching.—On all soils trenching or deep digging is highly beneficial, by reason of the greatly increased root-run available; and further, the soil is infinitely better in summer or winter for all vegetable crops, as moisture can pass quickly away in wet periods, while in dry ones it ascends and keeps the soil moist; consequently seasons of drought are not so destructive as on

shallow-dug ground. Unfortunately, serious consequences have on many occasions followed trenching when done in an improper manner. Therefore this work must be performed with judgment, bearing in mind the character of the soil and subsoil. If the soil is of a clayey character, with a close, heavy subsoil, it would be the height of folly to bring the bottom or subsoil to the surface, and bury the latter 1½ ft. or 2 ft. deep. Yet this has been done many times by men who should have known better. In all such cases the subsoil should be broken up well and turned over, at the same time mixing strawy manure, leaf-soil, road-scrappings, or anything that would make the whole porous and also improve the compost. When this has been done, the surface soil should be roughly turned over, working in manure, and leaving it lumpy, thereby exposing the greatest surface to the action of the frost. If this is done in the autumn or early winter, the ground will be in the best possible condition for the reception of seeds or plants in spring, and their growth afterwards will be of a very satisfactory character.

Where the soil is light and the subsoil of a fairly good nature, it is a good plan to trench it 2 ft. deep, bringing the bottom or lowest spit to the top, burying the surface or top spit at the bottom, and incorporating at the same time manure that is close and heavy (cow manure) with the soil. Such not only enriches the soil, but also makes it denser and better able to retain moisture. Any decaying vegetable matter may be buried when trenching, and if sewage is worked in at the same time, the ground is greatly enriched and filled with plant food that will be in the most available form by the time that the crops need it.

Rotation of Crops.—The importance of having different crops on the same piece of land annually is now fully recognised by most cultivators. For instance, Cabbage or other plants of the *Brassica* family would follow Peas and Beans, Onion or other root-crops after Celery; and so on all over the garden. It would occupy too much space to give scientific reasons why this should be so. Suffice it therefore to say that it has been proved most conclusively that Cabbage, Broccoli, Peas, etc., should not follow similar crops, unless it be known exactly what are the constituents removed from the soil by the crop, and how to replace them.

Even then the wisdom of doing so is doubtful. It will be found in actual practice that rotation cropping gives far the best results over a series of years.

Manuring.—As a rule, farmyard or town manure is principally relied upon as a fertiliser for gardens; and if this is fresh and not exposed to the action of the weather there can be no question as to its value, as good dung contains all the elements of plant food. It is seldom, however, that amateurs can procure really good fresh manure, especially in the vicinity of towns; moreover, the smell is often most disagreeable. Where any inconvenience occurs, chemical manures are easy to apply and much cheaper. All Cabbage, Cauliflower, Brussels Sprouts, and similar crops are vastly improved by a dressing of 1oz. of nitrate of soda, 1oz. of muriate of potash, and 2oz. of superphosphate, to every two square yards of ground. It is also an excellent stimulant for Onions, Celery, and all root crops. For leguminous crops like Peas and Beans, the nitrate of soda should be omitted, as these plants absorb all the nitrogen they require from the atmosphere. Kainit, at the rate of 2oz. to the square yard, is a good manure for Sea-kale, Asparagus, and all maritime plants, as well as for Beet, Onions, etc. On heavy soils, basic slag or bone meal is of much service at the rate of 2oz. to the square yard. Any crop showing signs of needing assistance may be treated to a little nitrate of soda or sulphate of ammonia, at the rate of 1oz. to the square yard.

When to Apply Manure.—Novices who have had little experience with chemical manures should be careful to apply them only when the plants are growing and root-action is going on. If applied at any other time, most, if not all, of the fertilising matter will be lost, particularly with such soluble manure as nitrate of soda. For this reason they should only be applied when the roots can seize upon them at once. When crops are fully developed, it is waste of time and money to apply any fertiliser; but where sewage, drainings from manure, stables, and other buildings are collected—as they ought to be—and no crops actually need the same, they should be thrown on vacant quarters in the garden. The soil will assimilate the salts and retain them for future crops, and thus nothing is wasted. It is astonishing what magnificent

produce is obtained from gardens cultivated and manured on the lines advised. And not only that ; such crops are tender and of the finest quality when cooked.

Cropping.—In dealing with the various vegetables which find a place in the kitchen garden, the alphabetical system of arrangement has been adopted, such being by far the easier for reference.

Artichoke (Globe).—This is much easier to grow than most amateurs imagine, as any fairly deep, good soil suits it. The best mode of raising plants is to sow seeds thinly at the end of March in nice friable soil, making the drills 4ft. apart. As the seedlings grow, thin them out to 3ft. apart in the rows, and afterwards keep clear of weeds. In the autumn heads will be formed by the strongest plants. If diluted manure is applied weekly, the heads will increase in size, and the plants will improve. On the approach of severe weather it is advisable to cover the heart of the plant with ashes, litter, or soil, removing these in spring. Half a dozen plants will supply a large quantity of heads if liberally manured.

Artichoke (Jerusalem).—This requires a deep, rich, well-worked soil to produce fine tubers, although it will thrive in almost any soil and situation ; but the produce is then inferior in every respect. The tubers should be planted in rows 2½ft. to 3ft. apart, and about 15in. apart in the rows, in February. When the tops are a few inches high, the roots should be earthed up after the manner of Potatoes, and kept free from weeds the whole season. As the tops die off in autumn, the tubers should all be lifted and stored in a cool, dry place, using the largest as required.

Asparagus.—Not very long ago the making of an Asparagus bed was a somewhat costly affair ; and it is only within comparatively recent times that it has become known that almost any good garden soil will grow this delicious vegetable well. The soil should be dug up roughly and deeply in the autumn or winter, and well manured at the same time. In March, beds 4ft. wide, with alleys between 18in. wide, should be made. Down the centre of each bed a drill should be made, and 1ft. from the centre drill should be made another on each side of it—three drills to each bed. Sow the seed thinly, and about 1in. deep ; as the seedlings appear, thin them out to 18in. apart in the rows or drills, taking care,

however, that the plants are not any closer together. During the summer the weeds must be kept down. Liquid manure or kainit will be very beneficial. Many cultivators mulch their beds in autumn with manure. In actual practice, however, spring has been found the best period at which to apply the mulch. CONNOVER'S COLOSSAL is one of the best varieties, being early, large, and very vigorous.

Beans (Broad).—Practically any soil will grow Broad Beans, although a heavy one gives the best crops. Early in February the seeds may be sown in double lines 6in. apart in the lines or rows, while the rows themselves should be 3ft. asunder. The seeds should be buried 3in. deep. When the young plants are a few inches high, the soil should be drawn up to them; while in windy districts the stems may be supported by running a line of string along each side. To afford a succession, seed can be sown every three weeks up to the end of April. For early supplies, EARLY LONG POD is suitable; and for later crops LEVIATHAN, GREEN WINDSOR, and BROAD WINDSOR, are reliable varieties.

Black Fly are very partial to the points of the shoots. When, therefore, the plants are attacked, it is an excellent plan to pinch out the points and burn them.

Beans (Dwarf or French).—Few vegetables grown will produce such a quantity of food as Dwarf Beans, providing no pods are allowed to form seeds. If only one or two pods in a plant are neglected in this respect further production ceases. If the weather is favourable about the middle of April such prolific varieties as SIR JOSEPH PAXTON, IMPROVED MOHAWK, or OSBORNE'S FORCING should be sown in a rich soil in a sheltered position. The seeds should be sown in rows 3ft. apart and 6in. apart in the rows. The young plants may be earthed up as advised for Broad Beans. Early in May CANADIAN WONDER or any of the above varieties may be sown. There may be a further sowing towards the end of May or early in June. This will afford a daily supply of tender Beans until the advent of frost, provided the plants are treated on the lines first suggested. Diluted liquid manure weekly will be a valuable aid, while a little muriate of potash and superphosphate will also tend to keep the plants healthy and productive.

Beans (Scarlet Runners).—Apart from their value as food, these may be very usefully employed as screen plants, for very effectively will they hide from view an unsightly wall. To grow them successfully dig a trench 1ft. deep. In this put 6in. of well-decayed manure, on that 2in. of soil, and then the Beans, 6in. apart. The first part of May will be early enough to sow, depending upon such varieties as PAINTED LADY, THE CZAR, or GIRTFORD GIANT. The young plants may also be advantageously earthed up. Stout sticks should be furnished directly the plants are noticed to “run”; or if against walls or fences strings may be employed, though I must confess that the latter have a somewhat untidy appearance till well furnished. To maintain a good supply keep the plants well picked before the pods get old.

Slugs are very partial to these Beans, and some method must be devised for capturing them. Air-slaked lime and soot act as a preventative; but bran and brewers' grains placed in little heaps are very attractive, and if these traps are examined each evening with a lantern before retiring there will be plenty of captures.

Beet.—Where salading is required, this vegetable is indispensable. For early supplies, THE EGYPTIAN or TURNIP-ROOTED is the best, as it quickly forms roots of good quality and colour. The seed for this variety may be sown early in April. For main crops, however, the middle of May will be early enough to sow such varieties as CHELTENHAM GREENTOP and MIDDLETON PARK. These two varieties have medium-sized roots of handsome shape, rich colour, and first-class flavour. No manure should be dug in when preparing ground for Beet seed; but any good soil which has been well manured for a previous crop will be most suitable. In such a soil the roots will be of good shape and of medium size. When the plants are several inches high a light dressing of kainit (1oz. to the square yard), will stimulate growth and assist to keep the crop free from insect foes.

Before any sharp frosts set in the roots should be carefully lifted, guarding against breaking them, and the tops cut 1in. from the crown. If this is not done, the Beet will “bleed,” and be of a bad colour when cooked. The roots should be stored in a

frost-proof shed, thus : a layer of dry sand, then a layer of Beet, and so on to a depth of several feet, covering the top layer with sand. In this way the roots will keep fresh and sound for months.

Borecoles, or Kales, are greatly esteemed as a winter vegetable ; and rightly so, as the winter must be exceptionally severe to injure the plants. Seed should be sown thinly about the middle of March on fairly good soil. These thin sowings effectually prevent the young plants from becoming "drawn" in the seed-bed. As soon as the seedlings are large enough, they should be planted out in good soil in rows 3ft. apart and 2ft. in the rows. When thoroughly established, draw the soil up to them. In common with all the *Brassica* family, they benefit greatly by the surface soil being constantly stirred with the Dutch hoe. The DWARF GREEN CURLED, COTTAGERS', and RAGGED JACK are excellent varieties. The first is especially to be recommended for town gardens and smoky districts ; the last for cold exposed positions.

Broccoli are always appreciated. Seeds should be sown about the end of March or beginning of April, protecting the bed with netting. As soon as the seedlings are of fair size, plant them out 2ft. apart each way in rich and firm soil, earth up as recommended for Borecole, and keep clear of weeds. For cutting at the end of September and in October, VEITCH'S AUTUMN GIANT and the same firm's SELF-PROTECTING can be recommended ; while for mid-winter SNOW'S WINTER WHITE is excellent, followed by SUTTON'S PEARL, VANGUARD, and LATE QUEEN.

With all Broccoli it is advisable to bend a few leaves of the plant over the heart when forming. This not only gives a cleaner head, but acts as a frost preventative. In the event of very sharp weather, all plants should be lifted and placed together in an upright position in a shed. Broccoli heads which are left exposed to frost are frequently rendered quite useless.

Brussels Sprouts.—To have this delicious vegetable in perfection a long season of growth is necessary. For this reason the seed should be sown in frames in February. If these are not available, select a warm corner of the garden and sow the seed about the middle of March in rich and friable soil. Do not allow any crowding in the seed-bed ; but as soon as the plants are large

enough, transplant without delay to a good open position. Many err by planting too thickly, with the result that loose open sprouts are produced, and the crop is altogether poor. 3ft. apart each way is a very suitable distance, especially if the soil be rich. ROSEBERRY is a good variety, as is also CARTER'S HOLBORN EXHIBITION.

Cabbages.—To procure Cabbages for spring cutting, the third week in July is a suitable time to sow the seed. Few varieties even now will surpass ELLAM'S EARLY DWARF or EARLIEST OF ALL. The seed may be sown broadcast or in drills. As soon as the plants are large enough, they should be put out in ground that has been previously well manured, 18in. apart each way. Earth them up when of sufficient size, as it steadies the plants as well as to a certain extent protects them. Early in the spring apply 1oz. of nitrate of soda to the square yard, selecting showery weather.

For use in the late summer or autumn, EARLY DWARF YORK, CHOU DE BURGHEY, and CHRISTMAS DRUMHEAD, are well worth growing. The last is a very late kind. Seed should be sown early in April, and the young plants afterwards put out 2ft. apart each way, and treated as advised for spring Cabbages.

The Savoy is one of the easiest of all vegetables to grow, almost all soils being suitable. The end of April is early enough to sow the seeds, putting out the young plants after the manner of other Cabbage. If sown before the end of April the crop is ready before its time, and no Savoy is so good in flavour if used before a frost appears. The action of the frost seems to take out the rather strong flavour which is peculiar to this vegetable. For general purposes, the DWARF GREEN CURLED is one of the best; but if small heads are liked, then TOM THUMB can be recommended.

Carrots.—In some establishments early Carrots are highly esteemed. To obtain them, sorts which mature early must be chosen—SUTTON'S GEM or FRENCH HORN, for instance. The seed may be sown early in March in sheltered positions in drills 1ft. apart, the soil being light and friable, as well as rich from the manure used for a previous crop. If not sown too thickly, little or no thinning will be necessary, for directly the roots attain the size of the little finger they may be utilised in the kitchen for soups, hashes, etc.

For the main crop early in April will be time enough, selecting ground which has been deeply dug and with *no fresh manure* near the surface, otherwise the Carrots will be "forked." On deep soils ALTRINCHAM or RED ELEPHANT will prove satisfactory; while in somewhat shallow ones the NEW or IMPROVED INTERMEDIATE will be the best. The drills should be from 12in. to 15in. apart, taking care that the soil is not sticky at the time of sowing. As soon as the seedlings are large enough to handle, thin them out to 6in. apart in the rows, and afterwards as young Carrots are wanted every alternate root may be lifted, leaving the remainder 1ft. apart. Lift the crop before bad weather sets in, cut off the tops, and store in sand, as advised for Beet.

Cauliflowers.—The culture of this vegetable is much the same as advised for summer Cabbages, except that about three sowings are desirable to keep up a succession during the summer months and well into the autumn. A sowing of EARLY LONDON may be made outside about the middle of March and another a month later, afterwards transplanting the seedlings to an open position and in good, rich, deeply worked soil. MAGNUM BONUM and AUTUMN GIANT will be the best midseason and late varieties to select. Some of the artificial stimulants already advised under "Manures" may be employed with advantage; and the plants will certainly have a better appearance if the leaves are tied over when the plants begin to "heart."

Celery is usually tabooed in small gardens by reason of the amount of space required. If, however, the plan here recommended be adopted, there is no reason why the vegetable should be omitted. Plants can usually be purchased cheaply. These should be inserted and great care taken that at no time are they allowed to suffer for lack of water—a fruitful cause of their "bolting." The plants may safely be put out by the end of May in trenches already prepared.

The following method was given me by a very successful market grower, and it has been found to work well. Instead of making the trenches 18in. wide and 4ft. apart as is usually done, throw out a trench 4ft. wide, or wider if necessary, and 18in. deep. In this place from 6in. to 9in. of well-decayed manure, and on that 2in. or 3in. of good soil. Plant the Celery in rows across the

trench four plants in a row and the rows 1ft. apart. Do not earth up too soon. Allow a good growth to be made, encouraging the same by copious waterings in dry weather, and employing diluted liquid manure if available. When the plants are 15in. high, remove all side-growths and suckers, and tie up each plant with bass. If the weather and soil are nice and dry, earth up the plants about 9in. On the approach of frost, the final earthing is done, and a light layer of bracken or other light litter is placed on the top of the trench, removing it in mild weather to allow the tops to dry. By this method plants can be kept good until late in the spring, and the percentage of loss is very small. White varieties are only good for early supplies; for the main crop it is better to rely upon pink or red varieties like PRIZE PINK, LEICESTER RED, or WRIGHT'S GROVE PINK.

Endive is a most useful salad plant, especially in winter. A warm, sunny position, with a nice porous soil, should be selected for the seed, which should be sown thinly in shallow drills 15in. apart in June, afterwards raking the surface even. When the seedlings begin to crowd, thin out the weakest, leaving the more robust 1ft. apart in the rows, and replanting the "thinnings" in lines 1ft. apart and a similar distance in the rows. If the plants left where they were in the rows are tied up and covered with an inverted flower-pot, they will blanch in rather more than a week. BATAVIAN is one of the best varieties.

Herbs.—Any or all of the herbs employed for seasoning dishes or garnishing may be sown outside early in April, in rich soil and in open sunny positions. All the dwarf-growing kinds may be sown in drills 1ft. apart; but taller growing kinds like Fennel should have 2ft. between the drills. Overcrowding in the drills or rows ought to be guarded against. Even such a common herb as Parsley is seldom seen in good condition owing to the crowded state in the rows. "Thin early and thin freely" would be a good motto to adopt with many kitchen garden crops, and especially with herbs.

Horse-Radish is so unsightly a crop during a greater part of the year that it has not been deemed advisable to deal with its culture.

Lettuce.—No form of salad plant is more universally appreciated than this. First as to the Cabbage varieties. Hardy kinds like

HARDY GREEN HAMMERSMITH or **LEE'S IMMENSE HARDY GREEN** should be sown early in August, and the plants afterwards put out, when large enough, 8in. apart in good soil on a warm border. These will be ready for use in May. Early in March a small quantity of seed may be sown in boxes in a cold frame, or on a warm site, and afterwards be planted out 6in. apart in a warm border. This will continue the supply. For spring sowing, **EARLY PARIS MARKET** is a delicious kind. Further small sowings should be made each fortnight from May onwards. If the establishment requires such, **CONTINUITY** is the best for this, as it resists drought and is not liable to "bolt."

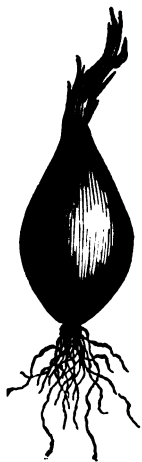


FIG. 24.—JAMES'S KEEPING ONION.

Where **Cos Lettuce** are preferred, sow in Autumn and treat exactly as before recommended. In the spring **PARIS WHITE** and **PARIS GREEN** are really first-class varieties and may be sown at intervals through the season.

In hot, dry soils it is a good policy to sow Lettuce thinly in drills 1ft. apart during the summer, and not transplant. By so treating it there is no check. Copious supplies of water are absolutely necessary, while diluted liquid manure will also be very beneficial now and then.

Onions.—In all gardens of any extent Onions are sown in late summer, the second week in August being a good time if the soil and weather are suitable. To get the best results the spring-sown varieties should be selected. They are quite as hardy as the Tripoli kinds usually selected. Moreover, autumn-sown Onions are never attacked by that pest, the Onion Fly ; nor is mildew at all in evidence. For both autumn and spring sowing the following varieties may be employed : AILSA CRAIG, CRANSTON'S



FIG. 25.—TREBONS ONION.

EXCELSIOR, COCOA NUT, BEDFORDSHIRE CHAMPION, JAMES'S KEEP-ING (Fig. 24), and TREBONS (Fig. 25), the last-named being very fine, though in heavy soils it suffers somewhat from hard winters.

The soil for Onions should be rich and deeply worked, fairly firm, and well drained, while if soot, wood-ashes, burnt refuse, or similar material be incorporated with the soil before sowing, it will be a decided benefit to the future crop. Drills 1ft. apart and 1in. deep should be drawn, and the seed sown thinly therein.

If in spring, the end of February or early in March is the best time, raking the ground over evenly. As the young plants get large enough, thin out to 6in. apart in the drills, unless very large bulbs are required, when 1ft. apart will not be any too great a distance. Early in May 1oz. of nitrate of soda to the square yard of land may be profitably applied. When the tops commence dying in the autumn, pull up the bulbs, allow them to lie on the ground for a week or so, turning them occasionally, and then store them in a cool, dry, frost-proof house.

Parsnips.—The ground for this crop should be deeply trenched, and any manure must rest at the bottom. Ground that has been manured for a previous crop will be best—say, for Celery. The seed should be sown in drills, and the young plants thinned out to 9in. apart in the rows. Keep clear of weeds, and on the approach of frost cover the bed with bracken. The roots can then be dug as required.

Peas.—The most important item in Pea culture is the preparation of the land. If possible, it ought to be trenched 2ft. deep during winter, leaving the surface rough. Rich and not too rotten manure should be worked in as the trenching is done, and any burnt rubbish will be beneficial. Towards the end of February sow CHELSEA GEM in drills 2ft. apart and about 3in. deep. If other sowings are made up to the end of May, according to the requirements, choosing the following varieties, there will be a plentiful supply: STRATAGEM, DUKE OF ALBANY, THE ALDERMAN, MR. GLADSTONE, BOSTON UNRIVALLED, CAPTAIN CUTTLE, VEITCH'S PERFECTION, and AUTOCRAT. Where a late Pea is required, CARTER'S MICHAELMAS should be sown in deeply worked soil in June, and kept moist by mulching.

Birds are very troublesome to Pea crops, alike when the plants are an inch or two high and at podding time. The guards as sold by ironmongers will help to keep the wretched sparrows at bay, if a little soil is drawn to both sides of the rows. The stakes should be inserted directly the guards are removed.

Potatoes.—Diverse opinions exist as to whether Potatoes are better with or without manure at planting time. One thing, however, is pretty certain: ground that is rich from previous manuring, and which has been well dug during the winter,

produces the heaviest and best flavoured crops. Heavy manuring, at planting time or later, with large quantities of chemical manures has a decided tendency to make the potatoes "soapy." Oftentimes this is attributed to the soil, whereas the fault lies in the manure.

Nothing is gained by very early planting. Supposing that nice warm sheltered sites or borders are available, the end of March or beginning of April will be quite early enough to plant, selecting kinds which are well known for their earliness, short top, and good cropping qualities. All the EARLY ASHLEAFS, HARBINGER, SHARP'S VICTOR, and MONA'S PRIDE are of sterling merit, and hard to beat for first supplies. For mid-season and late supplies, SATISFACTION, TRIUMPH, MAGNUM BONUM, and THE BRUCE are of proved value, and may be relied upon in almost all soils to produce very satisfactory results. It should be borne in mind that a complete change of seed is most desirable every two or three years; otherwise there is sure to be a deterioration in both crops and quality. The common practice of keeping all the small and deformed tubers for seed purposes is to be condemned. If possible all seed and cooking potatoes should be separated when the crop is lifted, and stored in a cellar or frost-proof shed, covering the latter with straw to prevent their going green. The former may be left exposed, spread out thinly but protected from frost.

Radishes can scarcely be grown too early to suit many, and it is astonishing what can be done by the aid of a few lights or even a few spruce boughs to act as shelter on cold nights. A warm corner of the garden should be selected for first sowings, which should be made any time in February when the weather is favourable; or if cold frames are available, so much the better. The soil should be both rich and light. Sow the seed broadcast and not very thickly, cover lightly with sandy soil, and protect as advised. Further sowings may be made from the end of March, according to requirements. The chief points are the provision of a rich, sandy soil, protection of the seed from birds, and plenty of moisture in dry weather. For first sowings in frames or on warm borders, few varieties will surpass EXTRA EARLY WHITE OLIVE-SHAPED and EXTRA EARLY SCARLET OLIVE-SHAPED; or for late sowings, FRENCH BREAKFAST and SCARLET SHORT TOP.

Rhubarb is always appreciated and is one of the easiest crops to grow. It may be planted in either autumn or spring, and with very simple contrivances the produce may be had some weeks in advance of the main crop. The best results are obtained from soil which has been trenched and thoroughly enriched with manure before planting. The plants should be inserted some 3ft. or 4ft. apart, and when it is desired to increase the stock they may be divided to almost any extent, for every "crown" will grow. Where it is desired to force some of the crop early, soda tubs, procurable from any grocer, may be obtained, the plants covered with manure, and the tubs placed over them. This, of course, is but a simple method. Directly after the crop has been "pulled" is the time to give plenty of manure to the plants. It should be thoroughly decayed. There are many excellent kinds, a good general purpose variety being MITCHELL'S ROYAL ALBERT, or EARLY RED, while if a superior kind is required, then CHAMPAGNE will answer the purpose.

Shallots may be planted in autumn, winter, or spring, and their general culture differs but little from that of the Common Onion. When planted at the first two seasons, the site must be a warm one. Shallots must be pressed firmly into the soil.

Spinach is highly esteemed by many, and is of the easiest culture. The seed should be sown about the middle of March, in drills 1ft. apart, the soil being good and friable. As the plants get large enough to handle, thin them out to about 4in. in the rows; and as the leaves increase in size, pick them separately, not, as is frequently done, cutting the whole of the plant. VICTORIA is a good variety for spring sowing. If the PRICKLY SEEDED is sown in an open situation about the middle of August, Spinach may be had in the winter and very early spring.

Tomatoes in the open are such a very uncertain crop with our climate, that in the average small garden it is hardly worth while attempting their culture.

Turnips are practically indispensable in any garden, and the earlier they can be had, the more are they appreciated. HALF-LONG WHITE FORCING is a variety that should be sown in a cold frame at the end of February, or outside at the end of March on a warm border, when well-flavoured roots will quickly be formed.

This may be succeeded by **EARLY WHITE** or **PURPLE MILAN**; while for midsummer sowing **JERSEY LILY** commends itself, as also does **VEITCH'S RED GLOBE**. The last is the best variety, in fact, to sow late for winter. In July a sowing may be made for autumn and winter use, **ORANGE JELLY** and **CHIEF CASTLE** being suitable for the purpose. A further sowing may be made in August. These will stand the winter, and the green tops will be useful to cut in spring. They are very tender.

Quarters for Turnips can hardly be too rich and friable. If wood-ashes can be incorporated with the soil when it is being prepared, germination of the seed will be hastened. The seed should be sown in drills 1ft. apart, and only *lightly* covered with soil. The young plants should be thinned early, leaving them 6in. apart in the rows. As the roots increase in size, every alternate root may be pulled, leaving the remainder 1ft. apart.

Turnip Fly is almost certain to attack the crop when young. If so, dust the crop early in the morning with soot. This, with the dew on the plants, will adhere to the foliage and render it distasteful to the pest. Late autumn Turnips may be stored after the manner of Beet, etc.

Vegetable Marrows.—Seed sown early in May, and kept at night, say, in the kitchen, will soon germinate. When the young plants are a few inches high, insert them singly in 4in. pots, and at the end of May plant out in an old rubbish-heap of soil or manure. Do not stop or otherwise prune the plants. Let them grow at will. If the soil is very light and porous, a mulch of strawy manure from stables will keep it moist. Assistance, too, will be derived from occasional soakings of liquid manure. **OLD MOORE'S CREAM** is still one of the best varieties; but a comparatively new kind well worth attention is **PEN-Y-BYD**.

There are several vegetables that have been omitted from the list—either because they are not generally grown, or because the space available in the average garden is so limited—the selection having been restricted to the more popular kinds. Sea-kale, Mushrooms, Cucumbers, etc., for instance, have not been included for the reasons stated.

Insects and Fungi.—Under the various headings, some of the pests which cause trouble have been remarked upon. There are

one or two, however, which call for rather more extended notice. Such is "Clubbing," a disease which is but imperfectly understood by the amateur gardener. It is caused by a species of Slime Fungi (*Plasmodiophora brassicæ*), and is difficult to combat. Nothing short of burning infested plants and not growing Cabbage on the same quarters for several years seems to be of any avail. The disease is also known as Finger-and-Toe and Anbury.

Beet suffers very much from the attacks of a blackish beetle, or rather of its larva, a black, woodlouse-like creature (*Silpha opaca*) which devours the leaves of the plants, and when full-fed goes down in the earth to become pupæ. No treatment seems of real avail, and the cultivator has largely to depend upon birds to destroy the grubs.

Another insect which is troublesome to the kitchen gardener is the pretty Asparagus Beetle (*Crioceris asparagi*). These and their larvæ feed upon the plants and cause them to turn yellow. Hand-picking is the best remedy, putting the creatures into a vessel of boiling water.

There is hardly any need to refer to the damage inflicted by the caterpillars of the White Butterflies. Nature, however, is very helpful here, as evidenced by the enormous numbers of larvæ of the White Butterflies destroyed by the Ichneumon Flies. Freshly-slaked lime dusted over the Cabbages in the early morning is very effectual.

Potato Diseases are, again, unfortunately only too well known. All diseased tubers should be burned, as the fungus passes the winter in them. The brown spots on the leaves are only too familiar, while the extension of the disease to the tuber itself is also well known. In gardens all plants which are noticed to be diseased should be lifted and burned. By way of prevention, the same ground should not be used for Potato culture for several years; while only varieties which are known to be of robust constitution should be employed.

Surface Caterpillars (*Agrotis segetum*, etc.), are very troublesome to Turnips. Carrots and other vegetable crops are also severely injured by these pests, which hide just beneath the surface of the soil and feed at night. Lime and soot in equal proportions may be advantageously used. Good results also frequently follow the

stirring of the surface soil with a hoe. Where kainit can be employed for vegetable crops as advocated, it will tend to keep many foes at bay; while hand-picking can be resorted to in most gardens for keeping down the more destructive of insect pests.

In the Kitchen Garden, as in the Flower Garden, Wireworms are a terrible pest, Potatoes, Carrots, Turnips, and many other crops being much injured by their attacks. The Wireworms are really the grubs of certain Click Beetles, which are familiar by reason of the fact that they perform a kind of somersault when laid upon their backs, and at the same time make a noise which has given rise to the popular name they bear. Soot is distasteful to them and should be worked into the soil; but trapping is the more effective way, employing for the purpose sliced potatoes, carrots, turnips, and the like, stuck in the ground by means of pieces of stick. These must be daily examined. Prevention, however, is invariably better than cure; therefore it would be well for the gardener to try the plan recommended by that practical entomologist, Professor Comstock. This is to destroy the beetles, by means of poisoned bait, before they have a chance of depositing their eggs. Freshly cut clover he found exceedingly attractive. Bunches of this were dipped into an arsenical preparation, and kept moist by placing boards over them. The beetles fed upon the clover and were killed in very large numbers. These traps should be distributed over the infested area in the early spring, when the Beetles could be captured before they had an opportunity of laying their eggs. It is worth a trial, as it has been used with the best results in America.

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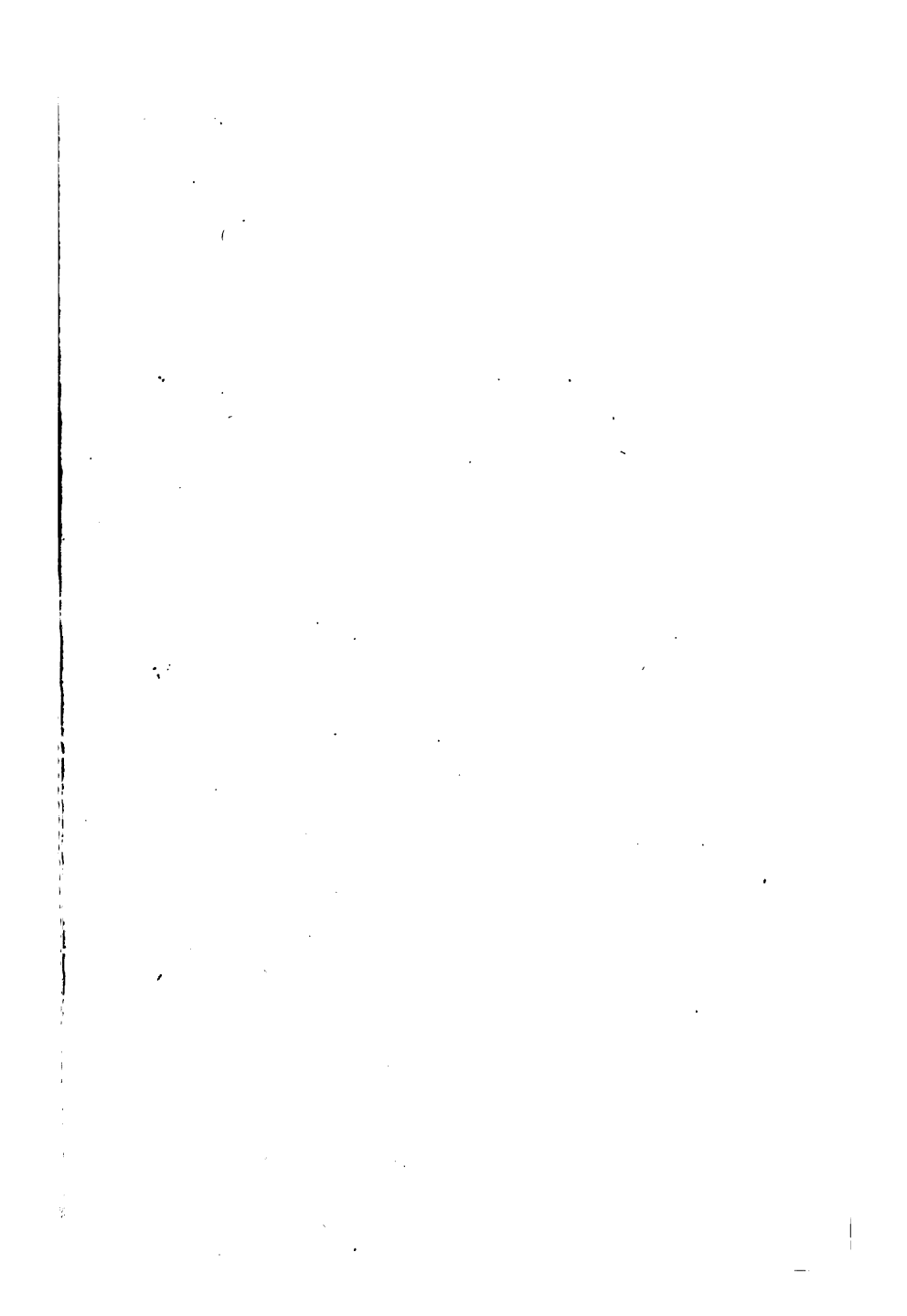
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